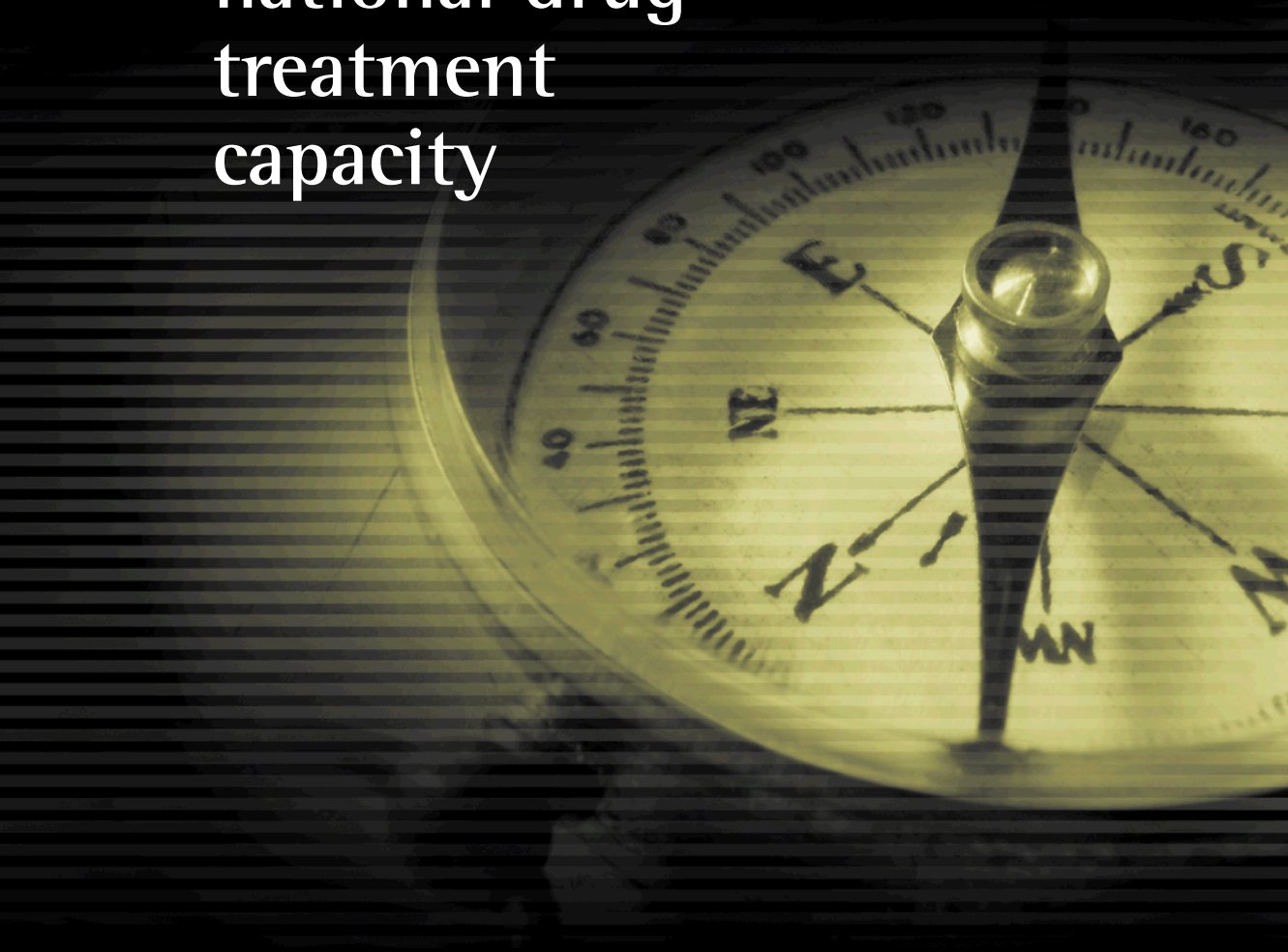
ANCD research paper 10

mapping
national drug treatment capacity



10

ANCD research paper

mapping national drug treatment capacity

Siggins Miller

A report prepared for the
Australian National Council on Drugs, February 2005

Published by the Australian National Council on Drugs
PO Box 1552, Canberra ACT 2601
Telephone: 02 6279 1650
Fax: 02 6279 1610
Email: ancd@ancd.org.au
Website: www.ancd.org.au

National Library of Australia Cataloguing-in-Publication data

Mapping national drug treatment capacity: a report prepared for the Australian National Council on Drugs

Bibliography.
ISBN 1 877018 11 2.

1. Substance abuse treatment facilities – Australia. 2. Drug abusers – Services for– Australia. 3. Drug abuse – Treatment – Australia. I. Australian National Council on Drugs. II. Siggins Miller Consultants. (Series: ANCD Research Paper: no. 10).

362.290994

Editor: Keith Sutton (KS Consulting Services)
Design: Starkis Design
Printer: New Millennium Print

Acknowledgement:

This work has been supported by funding from the Australian Government Department of Health and Ageing.

Contents

Foreword

This report introduces and offers examples of ways to develop benchmark profiles to answer the following questions:

- How may we better understand the types of alcohol and other drug (AOD) treatment services that are needed in Australia?
- What is the current profile of AOD treatment services across Australia?
- Where are the AOD treatment services and what do they offer?

The report includes a broad overview of approaches to service planning and resource allocation. It contains information about how other sectors, such as some mental health services, approach these questions. It also shows how some other countries have developed models of care in this sector, especially the most recent experience of the United Kingdom.

The Australian National Council on Drugs (ANCD) recognises that, in addition to any rational, population based formulas that might be used in making these decisions, other factors in the real world or at local level can and do come in to play. Sometimes this deliberately skews the service system profile to attend to particular special group needs and at other times this occurs despite the best efforts of planners. There are, of course, many other factors involved in establishing and running good treatment services.

It is unlikely that any region, state or national profile will exactly match a theoretically constructed set of service profiles based on characteristics of the population. However, there is real value in having these benchmarks as a backdrop to any discussion about what is needed. We therefore commend this report to those involved in resource allocation, service planning, advocacy and service delivery. It represents just one way of testing the suitability of the current profile and spread of services in any particular area and it provides some possible pointers to future decision-making.

The intent of this project was to map the current profile of treatment services across Australia. It also included development of a way of considering the current amount, type and spread of treatment services across the country and provision of signposts for future planning. The report now comprises a drawing together of experience and research from other places and other sectors and presents recommendations from this experience that might be considered for Australia in considering the range, spread and quantity of services as well as some information about current treatment distribution in the form of maps. The experience gained from the project contributes information for data collection about treatment provision and, through a series of recommendations, opens a doorway for possible further development of these data in the planning for the future.

The ANCD would like to publicly acknowledge and thank Siggins Miller Consultants for their work on this project. From the outset the ANCD recognised that this was an ambitious project and without Siggins Miller's professional approach and commitment to it we would not have the valuable resource that we do now. Finally, the ANCD would also like to thank all of the organisations and individuals who have assisted with the data collection process.

Professor Margaret Hamilton
Co-Deputy Chair
Australian National Council on Drugs

Executive summary

The project

In 2002, the Australian National Council on Drugs, principal advisory body to the Australian Government on drug and alcohol issues, decided to produce a resource to provide a picture of the actual number, nature and capacity of Alcohol and Other Drugs (AOD) treatment services around Australia. This task had two components: a mapping exercise, and a commentary on the results.

The mapping exercise

The mapping exercise would gather information about the nature and location of drug and alcohol treatment services in Australia. It would take place between July 2002 and November 2003, building on existing data sources. At first it was hoped that it could also gather information about treatment models or approaches, services catering for specific sub-populations, specific substances, sectors and sources of funding, capacity and other indicators of demand, and staffing profiles. It soon became obvious that this timetable and agenda were too optimistic, since they assumed that existing information about treatment services would be readily available and more consistent than proved to be the case. The extensive processes used to collect and verify these data are set out in Chapter 1.

After duplicates and closed services were removed, and other treatment services added, the resulting list totalled 1,118 AOD agencies throughout Australia. Their services are detailed in tables for each jurisdiction, an appended list of all the agencies, and a set of maps.

Analysis and commentary

The second aspect of the project was to analyse and comment on methods for determining an appropriate mixture of drug and alcohol services, the location, capacity and appropriateness of existing treatment services, and other significant issues arising from the data. Two steps contributed to the analysis and conclusions: a wide-ranging review of published literature and research on resource allocation principles and methods in health care; and a national workshop on resource allocation in August 2004 as the mapping reached its final stage.

Here is an abstract of the results of the literature review, which appears in full in Chapter 2 with detailed citations.

Abstract of the literature on resource allocation

We reviewed published literature and research on the allocation of resources to alcohol, tobacco and other drug treatment services within specified budgets, across and within geographical regions. However, studies of allocation of resources specifically for Alcohol, Tobacco and Other Drugs (ATOD) treatment services are limited in quality and quantity. We therefore also examined commentary on broader issues of resource allocation in the general health setting, and the associated formulas that have been developed to aid the task, to see if experience in the wider context can be applied to ATOD services in Australia.

The literature reflects a variety of approaches to questions of policy and strategy. For example:

- should government fund or subsidise certain services? Issues of safety, efficacy, effectiveness, and cost-effectiveness are relevant here, and analytic tools have been developed to address them.
- what is the best way to allocate available resources across different geographical regions (a critical question for Australia)? The literature on this aspect of resource allocation approaches is relatively well developed for general health services, but relatively undeveloped for ATOD services.
- what is the most effective way to allocate funds to specific services within a region or a State?

The review deals with the following topics:

- principles of resource allocation
- deciding which interventions will be supported
- allocating resources across regions, and existing methods for allocating resources to regions
- allocating resources within regions
- resource allocation to alcohol and drug services
- indicators of need for ATOD-specific services
- developing local systems of effective treatment
- options for developing a resource allocation formula for ATOD services in Australia.

Principles of allocation

The consensus in general health resource allocation is that decisions should be transparent, open to debate, and based on principles of fairness and equity; and that allocation of resources should be based on need.

Much resource allocation planning eventually produces a statistical formula; but the process is guided not only by finite resources, but also by the arguments and assumptions of varying political persuasions, ethical considerations, pressure groups and research findings.

Equity

In health, three common approaches consider equity in access to services, equity in capacity to benefit and equity in health status. Attributes of equity include equal opportunity to access services, a high standard of service for everyone, and unequal distribution of services to meet unequal need. (For example, in Australia, Aboriginal and Torres Strait Islander population have different health needs, and a health system for them requires very different approaches to resource allocation.)

Evidence

Policy is also guided by information gathered through research and the opinions of experts. When decisions are based on up-to-date information about problems and the most effective means of addressing them, it is possible to make rational judgments about the effects of current policy, reasons underlying the success or failure of various strategies, and possible future directions. In particular, links are needed between outcomes research, priority setting, and resource allocation. Research evidence is needed not

only to reduce risk, but also to increase resilience by addressing the social, economic and physical factors that lead to AOD use. Funding decisions to increase the efficacy of interventions can then reflect this more comprehensive evidence. When resource allocation is based on assessment of need, and the assessment is grounded in research into specific issues to bring about change, interventions are more likely to be effective, their effects will be understood, and developments will follow a logical progression.

Fairness in decision-making and priority setting

Stakeholders should participate in decisions, and the processes involved in making decisions should be publicly available. The rationales for priority setting must be relevant to the context, open to revision or appeal, and reflect a consensus of stakeholder and expert views.

The perspectives of stakeholders

Politicians, community members, and experts have different perspectives on the level of burden of illness caused by various types of drugs, and each of the three groups is likely to adopt different policies and make different allocations of resources. A trend in favour of greater stakeholder involvement in decision-making has led to counter arguments by some researchers for objective decisions based on data alone, and use of epidemiological data to identify met and unmet need within the health system, to ensure that decision-making is evidence-based. Others argue that consumers are well placed to be involved in identifying factors that contribute to any indices of level of need. However, several recent commentators document large gaps between the ethical-consumerist emphasis on client autonomy, and the reality of what clients actually want and seek in health care, or the service priorities they prefer. Studies in Canada, New Zealand and the UK found that many citizens are reluctant to be involved in decisions about resource allocation: they want to be involved only in setting the principles and values that will guide the decision-making.

Many governments establish information services for patients and the public, for diverse motives, including a desire by governments to involve the community in the difficult rationing decisions; consumerism, reflecting shifts in the status of health providers; and acknowledgment that the person who experiences treatment is the only one who can really assess if the information he or she obtains is adequate for decision-making, and thus for physical, psychological and social well-being.

A pressing issue in this regard is the drive to 'evidence based' medicine and resource allocation. Despite real gains, much of the 'evidence' used in health care is still probable or uncertain, and final decisions are still value judgments. Some authors caution that science runs the risk of wanting to regulate decision-making at the individual and at the funding level, in ways that are potentially against the interests of consumers. They argue that information for consumers has to address their values and preferences as individuals facing uncertain treatment choices; value decisions by communities and governments in deciding what services should be publicly funded; complex issues of treatments that can be effective, but not cost-effective; and so on.

Attitudes to treatments and treatment outcomes

Researchers have investigated differing attitudes to treatments and outcomes, which in turn influence decisions about allocating resources (which interventions, programs or services to fund). Studies include methadone maintenance (the sometimes conflicting treatment goals of consumers, staff, community groups, law enforcement agencies, government bodies, and funding agencies); the attitude of GPs to opiate users in neighbouring districts that varied socio-demographically; and conflicts among lead agencies in implementing a substance abuse intervention where issues of race and class were the primary sources of divergence.

Issues of implementation and management

Principles for assessing resource allocation formulas include a number of practical criteria. They should display technical robustness, minimise unintended incentives, be comprehensive, transparent and objective, responsive to the population effect of any changes, use reliable up-to-date data, and be stable and durable. Resource allocation formulas develop over time; and changes made on the basis of new formulas should be systematic and gradual. How resources are ultimately used will rely on an appropriate system of performance management.

Deciding which types of intervention are to be supported

Government programs face questions (often posed at a national or State rather than local level) about the interventions to be publicly supported, and the appropriate mixture of those interventions. Most western countries now have formal processes for assessing pharmaceuticals and new technology, but approaches to assessing other interventions are not as well developed.

These assessments need to consider the relative cost-effectiveness of intervention. Four types of economic analysis — cost minimisation, cost-effectiveness, cost-utility, and cost-benefit — are common modes of evaluation. The scope of the analysis may be partly determined by whether costs are estimated purely from the health care providers' perspectives, or from the perspective of the consumers and wider community as well. Benefits may be classified as direct health benefits to the individual, non-health improvements in quality of life for the individual and family, reduced use of other health care facilities, benefits to other agencies or productivity benefits.

Allocating resources across regions

To achieve geographical equity, resources should be matched to the relative needs of populations. Formulas for determining allocation of resources to regions typically include one or more of the factors, regional population size, variation in the relative level of need in different regions, and variation in the cost of providing services to different regions.

Issues in selecting sources of information for assessing regional needs include the cost and difficulty of obtaining it, the recency and completeness of the data, and how often it is updated. Existing data collections – census data, social security data, hospital and other health facility records – are relatively low-cost sources of information.

The benefit of surveys constructed in order to address specific issues is that they provide information at the level of the individual – typically a more direct measure of the variables of interest. The major drawback is the cost involved in a survey representative of the population of interest. It is difficult to reach sample sizes big enough to achieve results that can detect relevant differences between regions. Studies show that use of social indicator variables extracted from existing databases provides estimates of need comparable to estimates provided by surveys. Research using survey data, service use data, social indicators, and a case-control study concluded that the use of social indicators offered the most 'sensible distribution of human resources'.

A common starting point for regional allocation models is information on populations living in the region, or on specific target group populations in the region. However, it is widely recognised that per capita funding alone, or approaches based simply on demographic characteristics such as sex and age, do not adequately reflect variations in health care needs.

Several approaches – population-based needs funding, risk-adjusted capitation, weighted capitation, or predictive modelling – adjust health service allocations to capture individual or population characteristics that affect health care needs. These approaches generally reflect the objective of achieving equivalent access to health care services for populations with equivalent health care needs.

Other factors typically introduced into resource allocation models to reflect variation in need include relative mortality rates; directly measured morbidity; relative disability status; socio-economic factors such as levels of unemployment, relative income levels, and housing circumstances; household composition such as single parent families and single elderly people living alone; ethnicity such as Indigenous status; and geographic location.

Selection of need factors is often complex. Data are often in short supply and empirical evidence on appropriate need factors is sparse, dated or ambiguous in its implications. A major challenge is to assess the relative importance of these factors in driving differences in need. Another approach has been to observe variations in health needs for groups living in different localities, and try to identify the characteristics of those populations that best account for the variations.

Both the UK NHS and NSW Health systems use small area modelling to estimate the relative importance of factors influencing the need for hospital services. Several approaches have been developed that attempt to directly assess morbidity of populations using diagnostic information in records of service encounters – for example, diagnostic cost groups, adjusted clinical groups, and clinical risk groups. These diagnosis-based risk adjustment schemes attempt to measure morbidity of individuals or populations directly. Others have advocated directly measuring morbidity through (for example) the use of survey and other data sources to estimate differences in the level of morbidity for certain conditions in different populations. A major challenge for these approaches is the unavailability of comprehensive data on disease prevalence, which is clearly related to resource use.

Service use

In attempting to provide services to meet the needs of communities, policy makers and researchers have sometimes employed measures of service use (for example, the number of occupied bed days) and previous spending as direct indicators of the level of need. This is sometimes referred to as expressed demand. The validity of these measures as indicators of need has been questioned.

Service use is not necessarily an indicator of underlying need. People needing a service may not gain access to it locally, and people with relatively low needs may have easy access to a service in oversupply. Many factors may affect the relationship between need for and use of services, including relative supply of services in the local region, transport, higher levels of health literacy in more advantaged members of the community, and local policies involving more or less aggressive approaches to identifying cases. Use of services in one program may be influenced by relative access to services in another program: For example, relative availability of ambulatory or primary care services influences the use of hospitals. Nevertheless, there is a degree of relationship between need and service use.

Historical funding

In some instances, ongoing funding is based on the past use of resources – those who spend most tend to be allocated a greater percentage of available resources. The logic fails to take into account the possibility that higher use of resources may be the result of factors unrelated to actual need. The literature reports a number of studies where historical funding has been shown to be inequitable or ineffective, and suggests hypotheses to explain these findings.

Variation in the cost of providing services to different regions

In addition to variation in need, the cost of providing the same service may vary in different geographical regions. Many resource allocation formulas try to build in allowances for these cost differences. Costs differ across geographic regions for two main reasons – costs associated with urbanisation (the need for higher wages to attract staff, and higher costs for land and property), and costs associated with delivering services in rural and remote regions (diseconomies of scale owing to the small size of facilities and relatively small populations served over large areas, the higher proportion of travel, difficulty in recruiting staff, and lack of back-up services). Scotland, U.S., British Columbia, Alberta and Ontario are examples of jurisdictions that provide an adjustment for remoteness or isolation using population density or road distance as a proxy measure.

Other factors that may affect the relative cost of providing services to regions may include the need to employ specific costly strategies to meet unique needs of sub-groups (e.g., ethnic or cultural groups, youth); additional costs involved in treating severe, chronic, and difficult-to-treat cases; incentives for staff to work in isolated regions; the need to cater for a greater demand for specific ATOD treatment services, given the poor supply of other health care providers in the region; greater demand on public services because of the rate of poverty in a region.

Allocating resources to specific services within regions

While the allocation of funds to regions should be based on relative need, allocation of funds within regions should be output-based – that is, providers in the region funded on the basis of what they achieve or are expected to achieve. Questions that need to be addressed when considering funding on the basis of output include:

- do consumers with different issues/problems require interventions that vary in cost?
- are different approaches/interventions more cost-effective and more suited to the specific needs of individual consumers or groups of consumers than others?
- are some types of services more suited to meeting the specific needs of significant groups of consumers than others?

Methods adopted to address these concerns include diagnosis-related groups, resource utilisation groups, and level of need care assessment.

A primary issue in funding regional providers is cost-containment – that is, if providers are funded on the basis of services provided, there are no incentives for them to limit costs. This is one of the major criticisms of *fee for service* funding. In an attempt to contain costs and facilitate a more equitable distribution of resources, a range of approaches has been adopted which fund providers on the bases of set costs/reimbursements for treatments and/or set budgets based on estimated service use. They include prospective reimbursement methods, including casemix; block grants based on estimates of need or service use; managed care /capitation; and performance contracting.

Existing formulas for allocating resources to regions

Weighted capitation initially allocates according to the population size of different regions, and then adjusts these allocations according to other factors thought to affect the need for, and the costs of supplying services across these regions. (However, the assumptions behind weighted capitation make this method more applicable to allocation of resources in general health services than to ATOD-specific services.)

Generic Need Index: The NSW Health Department adopted and developed a model of resource allocation used in the UK. It allocates resources to Area Health Services based on an assessment of relative need for each AHS. The approach estimated need on the basis of age, sex, mortality rates, and 'all factors that affect per capita needs for acute health care that cannot be explained by an Area's age and sex composition'. NSW Health then devised the Generic Need Index to factor a measure of need into the resource allocation formula, using regression analysis of inpatient statistics, and analysed data from 154 local government areas. Difficulties in the choice of measures and pooling of variables are analysed in the review.

The *Social Dysfunction Scale* was developed by the New York State Division of Substance Abuse Services as a basis for resource allocation. It is based on seven indicators of need: for each county, total numbers of individuals in the following groups were obtained: school dropouts, AIDS, tuberculosis and syphilis cases, drug-related arrests, regular drug users, and unemployed people. For each of the seven variables, the number of individuals identified within a county was divided by the total number of individuals in the county considered to be at risk. It was concluded that this final score represented the relative contribution that each county contributed to the total level of social dysfunction in the state, and should be used as the basis for funding. Once again, this review analyses the statistical difficulties in the SDS, and concludes that it is a poor tool for estimating prevalence rates. Without a weighting for size of the population (and the actual size of the population at risk), it is also an inappropriate tool for determining the allocation of resources.

A proposed alternative to the SDS is the *Relative Needs Assessment Scale*, calculated in a way similar to the SDS in that it is based on the ratio of observed cases for a particular variable in a particular county to the reference group for that variable within the same county. Its addition is to weight each proportion with a proportion based on the number of observed cases for a particular variable within a particular county to the total number of observed cases for that variable across all counties. The stated purpose was to ensure fairer allocation of resources to smaller areas. However, the scale is subject to some of the same criticisms as apply to the SDS.

Relevant statistical considerations

In light of the questions raised by some of the existing allocation formulas, the review contains an excursus on such relevant statistical issues as aggregate data and the 'ecological fallacy'; prevalence and severity; summing prevalence rates for sub-groups; the use of multiple indicators of need; the use of correlational data; the comparison of expected with observed use; and under- and over-spending of resources compared to need.

Technical issues in allocating resources for ATOD-specific treatments to regions

Any formula for determining the allocation of resources needs to take into account the size of the population, the relative level of need across different regions, and the relative cost of providing services to different regions. A summary of the technical issues described in the preceding section is applied to resource allocation methods for ATOD-specific treatment services across and within the regions of Australia.

Resource allocation to alcohol and drug services

The attention of the review now moves to the relatively smaller body of commentary and research on resource allocation to AOD services in particular.

Indicators of need for specific interventions may be measures of factors that influence use or consumption, factors that are affected by consumption (for example, arrests, hospitalisation, morbidity and mortality), or factors that co-vary with consumption or associated problems. These measures have also included indicators of ATOD-related risk and resilience (factors related to the level of need for specific interventions).

While the choice of appropriate indicators is based on research, we must be aware of problems of generalisation. Correlates of substance use in one population might not be the same as correlates of substance use in other groups or cultures. A further consideration is the type of information used. Generally, in studies comparing regions, summary data for those regions are used.

The summary data used in determining the level of need for ATOD-specific services across regions typically include demographic characteristics of communities as well as social and economic correlates of substance abuse (social indicators).

Several studies proposed indicators of specific ATOD-related needs, including the number of users, the extent of the consequences, the level of consumption, and the level of expenditure; or domestic violence, drug and alcohol-related arrests, drug and alcohol-related mortality, and the number of alcohol retail outlets; or, in one study, principal component and regression analyses of 36 indicators to investigate the level of need for drug prevention.

Poverty and inequality are increasingly accepted as determinants of poor health. Irrespective of individual characteristics, places with a low income or high deprivation suffer the worst health on a range of measures. A range of explanations is offered for this connection. Recent commentators argue that the explanation most consistent with current research is that poor health results from decreased access to the material conditions, psychosocial influences, and resources that facilitate health. People with less purchasing power are more likely to be exposed to the ill-effects of inadequate housing, inadequate nutrition, unsafe neighbourhoods, occupational hazards, and the stresses produced by uncertainty, powerlessness and lack of control.

There is a well-established link between poverty and substance abuse, and the chapter reviews a series of recent studies illustrating the link.

Measures of socio-economic standing

Census data

A range of measures of socio-economic standing derived from data extracted from the 1990 U.S. Census comprised area median household income; average number of residents per square mile; per capita income of area residents; residents living below poverty; families living below poverty; area children living in poverty; female-headed families below poverty; female household heads with own children; households receiving public aid; unemployed area residents over 16 years; households reported as vacant; single person households; households with more than one person per room; households with a single person 65 years and older.

Measures proposed in a UK study were the proportion of people in owner occupied buildings and in private rented accommodation; proportion of households without two cars; proportion of men aged 26–64 without a paid job in the past 10 years; proportion of people in households with a head in manual employment class; and the proportion of eligible families not on family credit.

Another set of composite need indices for alcohol and drug treatment services in the U.S. proposes variables including the percentage of the population that belongs to specified minority groups (Hispanics, African Americans, American Indians); the percentage of the population in prison; and incidence rates for IDU-AIDS, TB, Hepatitis B and syphilis.

Income level

A study of the use of services in Northern Ireland investigated the use of information on social security benefits extracted from hospital ward data. The data included recipients of income support and family credit. These measures gave a more immediate and accurate information on level of income than census data. However, because of the high correlation between these two measures, research should use either one or the other measure, or derive a composite of the two.

Other measures

A study of psychiatric admission found that the most powerful predictors of variation between observed and expected admissions across district health authorities were rates of notification of drug users, standardised mortality ratios, and levels of illegitimacy. An alternative but less powerful predictor was an underprivileged area score.

Participation in education

Early research concluded that alcohol and drug dependence affected educational participation and performance. Measures of school achievement (attendance rates, performance, highest level of education) correlated highly with an 'environmental deficit' factor, along with measures of socio-economic deprivation and AOD-related morbidity and mortality. Proposed measures of participation in education include the percentage of population three years and older enrolled in school; average attendance rate for area public elementary schools; percentage of population 25 and older with no more than 8th grade education; average 6th grade reading score; average attendance rate for area public high schools; average public high school senior composite act score; average public high school junior reading score; and the average graduation rate for area public high schools.

Types and levels of substance availability and consumption

Early research linked the availability of alcohol with per capita consumption and the extent of alcohol-related problems. However, when this view was subjected to regression analysis to predict service use, there was only a very weak relationship between the availability of alcohol outlets and the rate of outpatient admissions. Suggested refinements to such a measure include the number of liquor outlets per 10,000 population, and the total litres of alcohol sold by type and alcohol content.

ATOD-related legal consequences

The rates of detection of use and supply of illegal substances and illegal use of alcohol are affected by level of consumption and associated with other consequences of consumption. Detection rates, however, are also associated with police resources and practice, and government policy. A U.S. study of participation in a methadone program found that over half the identified addicts were unknown to police. This has implications for the use of arrest and incarceration rates as indicators of drug use.

The U.S. Drug Use Forecasting program lists ten criminal arrest categories as predictors (motor vehicle theft, homicide, criminal sexual assault, assault, robbery, prostitution, other sex offences, disorderly conduct, burglary, and theft). A study combining these ten categories with driving under the influence, liquor law violations, and narcotics possession or distribution found moderate relationships with outpatient AOD-related admission rates.

Some researchers adopt an 'explicit mention' criterion for identifying arrests related to alcohol or drugs: there must be an explicit connection to drug and alcohol issues in the original data (for example, a drink driving offence). The potential shortcomings of arrest data include variations owing to local crackdowns, biased coding and enforcement, and missing agency data.

ATOD-related mortality

An editorial in the *British Medical Journal (BMJ)* reviewed formulas for determining allocation of health resources. It argued that, despite increasing sophistication, a similar result could be produced by basing a formula simply on population size and age, weighted by the under 75 year standardised mortality ratio. This would be simpler and clearer than combining the results of 10 different but highly correlated instruments.

Other factors being equal, substance abuse will increase the likelihood of dying. It would seem reasonable to use AOD-related mortality as an indicator of need. The problem, however, is that the extent to which substance use contributes to specific causes of death is not constant, and there is often a time lag between use of a substance and death. Accordingly, substance-related deaths tend to inform us more about the past consumption patterns of individuals (sometimes from many years previously). If mortality related to substance abuse may bear little relationship to present consumption, mortality is a relatively poor indicator of current substance use, immediate substance-related harm, and the need for intervention.

ATOD-related morbidity

The health consequence of alcohol, tobacco, and other drug use is well documented. The results of the U.S. National Household Survey of Drug Abuse (NHSDA) have been used to estimate State-level prevalence of drug, alcohol and substance abuse disorder.

Measures for ATOD-specific service use include the proportion of total admissions in an area for conditions related to use of cocaine, alcohol, opiates, hallucinogens and marijuana.

Recent studies discussing the potential and limitations of different types of data sources for developing indicators of need for AOD treatment services suggest that multiple measures in composites and profiles, rather than depending on a single type of data, are to be more likely to reveal a complete picture of area needs for substance use treatment.

Developing local systems of effective treatment

Resource allocation models account for distributing AOD funds to regions. The next level of consideration is to know what elements to spend it on to provide an effective treatment system. Apart from some work recently commissioned by the NSW Department of Health's Centre for Drug and Alcohol, the only other attempt to provide guidance at the local level is by the UK NHS. In 2002, the National Treatment Agency for Substance Misuse published *Models of Care*, which provides a national framework for developing local systems of effective drug treatment in England. This framework aims to achieve equity, parity and consistency in the commissioning and provision of substance misuse treatment and care.

The concept behind *Models of Care* is that local Commissioners should seek to develop an integrated systems approach to meeting the multiple needs of drug users in their area – not just a series of separate services – and have explicit links to other health, social care and criminal justice services. Drug users in all local areas should have access to the full range of services in four tiers:

Tier 1 Non-substance misuse specific services requiring interface with drug and alcohol treatment

Tier 2 Open access drug and alcohol treatment services

Tier 3 Structured community-based drug treatment services

Tier 4 Residential services for drug and alcohol users.

In addition to a full range of tiers 1 to 4 services, users should also have access to a full range of evidence-based treatment modalities within these tiers which include open access services, advice and information services, needle exchange facilities, care planned counselling, structured day programs, community prescribing, inpatient drug use treatment, and residential rehabilitation. Systems of care planning and coordination ensure that those who enter structured treatment services receive an agreed written care plan, which is subject to regular review with a care coordinator. Users may receive treatment from a range of professionals and from more than one service at same time or consecutively.

The Victorian Framework for Service Delivery

Victoria has developed a *Framework for Service Delivery* of AOD treatment services to describe purchase of specialist drug treatment services and key components of the range of services. Treatment services under the *Turning the Tide* initiative will focus on providing specialist services for young people, strengthening community-based treatment services, providing training to health professionals, and developing a community education and information strategy. The aim of these new initiatives is to ensure one coherent service system and a consistent standard of service delivery of specialist drug and alcohol services to those in the State who need them most.

The system focuses on two client groups within each region – young people and adults. Specific service elements for young people include outreach, counselling consultancy and continuing care, supported accommodation, peer support, and Aboriginal services. Service elements for the general population should be available – or able to be accessed from each region – and include residential withdrawal, rural withdrawal support, home-based withdrawal, outpatient withdrawal, substitute pharmacotherapy: specialist methadone services, counselling consultancy and continuing care, residential rehabilitation, supported accommodation, peer support, and Aboriginal services.

Options for developing a resource allocation formula for ATOD services in Australia

The review concludes with suggestions made in the literature about options to consider in the allocation of resources for ATOD-specific treatments across and within regions.

National workshop on resource allocation in AOD

A workshop on resource allocation and mapping treatment capacity was held in Sydney on 25 and 26 August 2004. Day one considered the implications of studies and commentary on resource allocation in health for future work in alcohol and other drugs. Day two considered the results of efforts to map treatment capacity at the national level and implications for future data collection. Participants in the workshop included representatives of the ANCD, the Australian Government Department of Health and Ageing, officers of State and Territory jurisdictions, and the Australian Institute of Health and Welfare (AIHW).

Day one: The implications of the literature on resource allocation

An invited panel of expert speakers – Professor Helen Lapsley, Associate Professor Jim Pearse, and Mr Gavin Stewart – spoke about resource allocation in general and specialist health areas built on their long experience in health economics, health policy analysis, and parallel issues in resource allocation to mental health services.

These presentations were followed by group discussion on issues in resource allocation at State, Territory and national levels, and the roles and responsibilities of the various jurisdictions; the implications of the literature and discussion for developing resource allocation methods in the drug and alcohol area; and on who needs to do what to progress resource allocation methods and issues.

Day two: Efforts to map treatment capacity at the national level

The history, timeframes and processes of the mapping exercise were outlined, and the workshop explored the implications for data collection in the future. An example of an interactive map of the data was demonstrated.

General discussion followed on the future of the mapping exercise, State and Territory commitment to the project, and ways to keep the mapping data current. The issues raised in this discussion are addressed in the conclusions and recommendations that follow.

Conclusions and recommendations

The results of the mapping project

The results include a number of observations about the clarity, consistency, and timing of future data gathering about AOD capacity in Australia.

First, the rate of change in the field is very rapid. The personnel, range of services, and the existence or location of AOD services change constantly. The appended list of treatment services differs markedly from 2001/2002 sources. Some AOD services that operated then no longer exist, or operate in a different manner. New services have come into operation. There is a clear need to devise a reliable process for keeping the list of agencies and services up-to-date.

We *recommend* practical steps to keep the current database up-to-date and reliable.

Defining treatment services

The mapping project used the agreed categories of the Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS–NMDS). Agencies interpreted these service categories in markedly different ways, and it was suggested that the people delivering the services should be directly involved in the choice of a transparent set of descriptors.

The UK NHS *Models of Care* takes a quite different approach to describing what services are offered. The evidence-based treatment modalities in this structure include open access services, advice and information services, needle exchange facilities, care planned counselling, structured day programs, community prescribing, inpatient drug use treatment, and residential rehabilitation, arranged in four tiers of intensity. A set of descriptors based on a framework of this sort would give a clearer picture of the availability of primary care and specialist AOD treatment services in Australia.

For reasons of purpose and method, the outputs from the AODTS–NMDS and COTSA collections are in quite different forms. The principles of inclusion differ: nearly half the agencies listed by NMDS did not take part in the COTSA census, and just under 40 per cent of the respondents to the COTSA census are not listed in NMDS. The two collections handle multiple programs within single auspices in different ways. It will be important to seek some consensus on the profile of services that legitimately represent AOD treatment capacity in each sector.

We *recommend* that the ANCD refers the results of the mapping exercise and the accompanying observations to the Intergovernmental Committee on Drugs (IGCD) to apply the implications for AODTS–NMDS and any future census of treatment services such as COTSA (in particular, the scope of the data collection, consensus on the profile of services that legitimately represent AOD treatment capacity in each sector, ways to capture both primary care and specialist AOD treatment services, and an agreed set of descriptors reflecting actual practice in the field).

For the purposes of this project, we have erred in the direction of including a service if at least one of its primary goals was to offer AOD treatment of a recognised sort. Private sector services have been included where we had adequate data, and some self-help groups, sobering-up centres, and services that provided only information, education, accommodation, brief counselling and crisis interventions have been included when it was clear they represented capacity in the treatment system.

Other features of capacity

The project hoped to give specific details about several topics that should be part of the measure of the sector's capacity – treatment models or approach, proportion of services catering for specific sub-populations, focus on specific substances, the longevity of funding, treatment capacity and waiting times, and staff profiles and qualifications.

The NMDS and COTSA questions about this information were not always clear or consistent, and the answers were between two and three years out of date when the appended database was compiled. There was no corresponding source for many of the additional agencies we have included. The ANCD agreed that an attempt to record these features exhaustively was unlikely to succeed. We have therefore made a partial attempt to address these issues by including brief descriptive notes whenever such information was available.

In light of the fact that these features are self-evidently important to assessing capacity, we *recommend* that the design of future instruments for gathering data about sector services build in consistent and agreed questions about treatment models or approach, proportion of services catering for specific sub-populations, focus on specific substances, the source and longevity of funding, treatment capacity and waiting times, and staff profiles and qualifications.

Pharmacotherapy and methadone maintenance

While all the jurisdictions were asked about the availability of data on methadone prescribing, only four jurisdictions provided us with this information, and in different forms. It was not possible to combine this partial information with treatment agency data in a realistic map. In addition, it would be necessary to map the locations of methadone and buprenorphine prescribers by provider number, since the prescribing doctor has a separate provider number for each location where he or she practises.

We *recommend* that the ANCD considers whether it will add value to map current pharmacotherapy capacity by individual prescribers and dispensers.

Future use of the mapping resource

The appended list of treatment agencies has also been made available to the ANCD as a database, together with an interactive electronic map that can be queried to display additional information about location, approach, and the services available. Changes happen constantly and rapidly in this field, and some of the information current at the end of this project may be out of date in a very short time. It will be helpful if the councils and research bodies who design and carry out periodic data collection agree on definitions and a data dictionary that will afford the AOD field an evidence-base comparable in value and efficacy with collections in other areas of health and well being.

Indicators of need in alcohol and other drugs

In the absence of either an agreed ATOD-Specific Needs Index or a resource allocation formula for ATOD treatment services in Australia, no one is in a position at this moment to say with any authority whether the extent and nature of resource allocation in the sector is appropriate.

The sector agrees that it would be useful to commission a *Models of Care* type project at the national level. This national project would then provide guidance to States and Territories about what treatment elements to fund if the objective is to have evidence-based systems for treating and preventing alcohol and other drug problems. Issues specific to all Australia, such as Indigenous issues and geographic distances, need to be considered.

We therefore *recommend* that the ANCD endorses the development of an ASNI to offer reliable and valid indicators of need in the ATOD area for planning and policy uses, drawing on the research and experience set out in the literature review.

We *recommend* that the States and Territories consider developing resource allocation formulas for use within their jurisdictions, also drawing on the experience described in the literature.

We *recommend* that the ANCD, in collaboration with the jurisdictions, commissions development of evidence-based commissioning guidelines or models of care appropriate for regional use in Australia, building on the experience in the NHS.

We *recommend* that a process similar to the method employed by the NHS in developing *Models of Care* be applied in Australia at the national level.

1. The aims of the project

The Australian National Council on Drugs (ANCD) is the principal advisory body to the Australian Government on drug and alcohol issues. Membership of the ANCD includes people with a wide range of experience and expertise on various aspects of drug policy. In 2002 the ANCD decided to produce a resource to provide a picture of the actual, number, nature and capacity of AOD treatment services around Australia.

This task had two components: a mapping exercise, and a commentary on the results.

The mapping exercise would provide information about drug and alcohol treatment services, by building on existing data sources such as the Clients of Treatment Service Agencies (COTSA) national survey and the Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS–NMDS). It was hoped the mapping exercise would yield the following information about treatment services in Australia:

1. The nature of the service (that is, outpatient/community based, private alcohol and other drug services, in-patient, residential, therapeutic community, including clear differentiation between medical (pharmacotherapy) and residential-type approaches)
2. The treatment model or approach of each service (for example, abstinence, etc.)
3. The number, proportion and characteristics of treatment services that cater for specific sub-populations (for example, women with children, Aboriginal and Torres Strait Islanders (ATSI), youth, comorbid clients)
4. Whether the service focuses on a specific substance (for example, alcohol only)
5. Whether the service is non-government, not for profit, private or government run, and the nature (for example, source) and the longevity of its funding (for example, three-year recurrent, six-month pilot, etc.)
6. Treatment capacity (that is, how many episodes of care or treatment opportunities per year, maximum and average length of stay, etc.) of identified treatment agencies
7. Waiting times to access places at the time of request, or other indicators of demand for services
8. Staffing profiles (for example, professionally qualified, work experience trained, etc.)
9. Geographic location (that is, address, postcode, etc.) of each agency for mapping purposes.

The second part of the project would provide an analysis and commentary on the findings of the mapping – specifically, examination and discussion of the following issues:

1. Methods to determine an appropriate mix of drug and alcohol services, such as the possible development or application of formulas which consider demographic data, alcohol sales figures, drug usage survey data, health indicators, etc.
2. Analysis and commentary on the location, capacity and appropriateness of existing treatment services
3. Analysis and commentary on any other significant issues arising from the data
4. If the analysis is based on any references to geographical areas or other comparative descriptors, clarification of the rationale for its use.

The ANCD appointed Siggins Miller to carry out the project.

The original project plan

Initially it was hoped the project could be completed between July 2002 and November 2003, with the following components:

- ANCD to approach State, Territory, and Australian Government Ministers seeking cooperation with the project and contact details in each jurisdiction
- search published literature for research and commentary on resource allocation formulas in health care, and drug and alcohol in particular
- sub-contract with Mipela (GIS), a specialist in geographic information system solutions for managing spatial information, to design and produce physical and interactive maps in line with ANCD's requirements
- negotiate with jurisdictions about availability of the data nominated by ANCD
- discuss with ANCD any implications of the availability of data from primary sources for the scope and timing of the project
- present a draft literature review for comment by ANCD
- analyse feedback from State, Territory and Australian Government departmental officers about the mapping exercise
- identify key officers and academics in health service planning and planning in the AOD area
- interview relevant informants about health service planning and resource allocation methods
- collect data from jurisdictions, AIHW, NDARC, and other nominated sources
- prepare database and data management processes to collate and check data from existing sources
- prepare data for State, Territory and Australian Government departmental checking
- Mipela prepares agreed products
- prepare and distribute material for a national resource allocation workshop
- draft report and mapping products submitted by October 2003 for comment
- submit final report by the end of November 2003.

In fact, for the reasons described below, it soon became obvious that this timetable was too optimistic, since it assumed that existing information about treatment services would be readily available and more consistent than proved to be the case.

The first task: mapping treatment capacity

In August 2002, the Chair of ANCD, Major Brian Watters, wrote to all State and Territory Health Ministers introducing this project, and seeking their help in obtaining data. This letter was followed up with repeated phone calls and emails. With one exception, by late 2002 all jurisdictions had agreed in principle to cooperate, and nominated contact officers. The one outstanding jurisdiction agreed to participate in July 2003.

When we contacted the nominated officers, however, the only data immediately available was ADIS information from three States and some hard-copy guidebooks. Almost all the contact officers said the information ANCD wanted could be found in the National Minimum Dataset (AODTS–NMDS) and Clients of Treatment Services Agencies (COTSA) Census collections. The timelines of the project therefore were revised with the consent of the ANCD.

Accordingly, with the help of the Australian Government and officers of the Australian Institute of Health and Welfare (AIHW), in October–November 2003 we obtained permission and ethical clearance from AIHW to obtain the NMDS data for 2001–02.

After discussions with Richard Mattick and Fiona Shand of the National Drug and Alcohol Research Centre (NDARC) at the University of NSW, we obtained their permission to use results from the COTSA census 2001 conducted over a 24-hour period on 2 May 2001. In February 2004, we sent a letter from NDARC to 553 agencies in the COTSA survey asking leave to use their data. There were no objections.

These steps, and repeated contacts with jurisdictions about the availability of their own information, gave us access to the NMDS data in late 2003 and the COTSA results in early 2004. By now we also had received the list of Indigenous AOD agencies from the National Drug Research Institute (NDRI) at Curtin University. This is what those lists contained:

	NMDS collections 2001–02	COTSA census 2001	NDRI Indigenous agencies
ACT	8 treatment services	6 treatment services	2 AOD programs
NSW	200 treatment services	205 treatment services	37 AOD programs
NT	21 treatment services	18 treatment services	70 AOD programs
QLD	84 treatment services	67 treatment services	32 AOD programs
SA	48 treatment services	32 treatment services	30 AOD programs
TAS	14 treatment services	14 treatment services	1 AOD program
VIC	134 treatment services	75 treatment services	31 AOD programs
WA	26 treatment services	44 treatment services	73 AOD programs

Duplicates were combined, and these sources were then supplemented by:

- ADIS data from some jurisdictions
- some State health department guidebooks
- pharmacotherapy prescribers' data from three States
- the Network of Alcohol and Drug Agencies Inc (NADA)'s membership list for NSW
- website searches
- telephone and email contacts with multi-centre agencies, and
- AOD programs of Divisions of General Practice[1]

After we removed duplicates and closed services, and added other treatment services not included in the NMDS, COTSA or NDRI data, the resulting list totalled 1,118 agencies:

ACT	15 services:	Government 2, NGO 11, ATSI 2, Private 0	+ 12 individual methadone prescribers
NSW	353 services:	Government 194, NGO 118, ATSI 28, Private 13	+ 717 individual methadone prescribers
NT	56 services:	Government 5, NGO 10, ATSI 35, Private 6	+ 2 individual methadone prescribers, 4 clinics
QLD	217 services:	Government 73, NGO 109, ATSI 19, Private 16	No data on individual methadone prescribers
SA	88 services:	Government 46, NGO 15, ATSI 22, Private 5	No data on individual methadone prescribers
TAS	35 services:	Government 22, NGO 12, ATSI 0, Private 1	No data on individual methadone prescribers
VIC	224 services:	Government 87, NGO 97, ATSI 28, Private 12	+ 388 individual methadone prescribers
WA	130 services:	Government 18, NGO 56, ATSI 52, Private 4	No data on individual methadone prescribers
Australia	1,118 services:	Government 447, NGO 428, ATSI 186, Private 57	

[1] We first wrote to all Divisions through the Australian Divisions of General Practice (ADGP) about AOD programs. Later, the Primary Health Care Research and Information Service (PHC RIS) supplied answers to the relevant questions in the Annual Survey of Divisions. We contacted the eight Divisions that listed programs – only three said they directly offered treatment services to clients.

Verification

The process for checking the services thus listed was as follows. As a first step, we prepared a catalogue of the entries for each jurisdiction as they appeared in the NMDS and COTSA collections, and the ANCD sent it to the States and Territories with a request to check the accuracy of the data.

- One State's D and A Unit checked and corrected the whole list, which could now be regarded as accurate and complete
- Two States appear to have distributed relevant entries to their area or district health services, and five of these areas sent amendments
- There was no feedback from the other jurisdictions
- The Department of Health and Ageing provided its list of 18 Australian Government-funded NGOTGP agencies to confirm the information already in hand.

As a result, with the exception on one State, the accuracy of the currency of the information still remained uncertain. We therefore took the following steps between July and October 2004:

- A request for agencies to contact us by email to check their entries was posted on ADCA Update on 9 July 2004. This was supplemented by emails to 86 NSW agencies and eight ACT agencies for which NADA supplied email addresses. These actions generated over 65 email responses and a number of phone calls.
- In the case of several agencies with multiple and sometimes conflicting entries in the source databases, we sent those agencies their listings by email, and in each case received helpful clarification of the present nature of their activities.
- Wherever possible, entries were checked against relevant agency websites (about 450 websites were visited).
- Finally, we then telephoned all the agencies whose entries were not yet verified. Wherever possible, all the listed services were contacted by telephone (only a few services could not be reached by phone). During the individual calls, the activities of each agency were checked interactively against the data definitions used in the NMDS.

The resulting database lists agencies by jurisdiction, with the fields: organisation name, address and contact details, treatment services offered, and descriptive notes.

Services listed by category

The total number of services in each category offered by the 1,118 listed agencies is as follows (the majority of agencies offer a range of these services):

Withdrawal management (detox)			Rehabilitation		
	Residential	Non-residential		Residential	Non-residential
ACT	4	3	ACT	6	1
NSW	48	69	NSW	79	55
NT	6	8	NT	10	11
QLD	24	38	QLD	42	10
SA	6	5	SA	3	7
TAS	3	12	TAS	2	3
VIC	34	62	VIC	39	52
WA	15	14	WA	16	26
Australia	140	211	Australia	197	165

Counselling			Support and case management		
	Residential[A]	Non-residential		Residential[B]	Non-residential
ACT	2	6	ACT	5	5
NSW	74	225	NSW	77	159
NT	11	19	NT	3	33
QLD	18	169	QLD	7	18
SA	9	57	SA	6	43
TAS	6	27	TAS	2	25
VIC	33	160	VIC	26	121
WA	16	63	WA	8	51
Australia	169	726	Australia	134	455

[A] Includes counselling provided in 138 residential detox or rehab settings

[B] Includes support or case management provided in 101 residential detox or rehab settings

Information and education			Assessment only		
	Residential[C]	Non-residential		Residential[D]	Non-residential
ACT	2	7	ACT	1	4
NSW	82	212	NSW	65	208
NT	5	18	NT	6	9
QLD	10	81	QLD	6	63
SA	8	66	SA	3	51
TAS	3	6	TAS	4	26
VIC	19	119	VIC	15	115
WA	11	49	WA	7	33
Australia	140	558	Australia	107	509

[C] Includes information and education provided in 120 residential detox or rehab settings

[D] Includes assessment provided in 94 residential detox or rehab settings

Pharmacotherapy [E]			Other treatment services[F]		
	Residential	Non-residential		Residential	Non-residential
ACT	1	3	ACT	1	4
NSW	19	61	NSW	7	25
NT	1	2	NT	1	18
QLD	4	18	QLD	3	9
SA	1	6	SA	0	6
TAS	1	19	TAS	0	17
VIC	18	43	VIC	4	17
WA	2	4	WA	5	29
Australia	47	156	Australia	21	125

[E] Excludes individual prescribers or dispensers

[F] Includes other forms of service provided in 11 residential detox or rehab settings

Services State by State

The same information on a State-by-State basis is as follows:

ACT (15 services)*		
Detoxification	4 3	7
Rehabilitation	6 1	7
Pharmacotherapy	1 3	4
Counselling	2 6	8
Support	5 5	10
Information	2 7	9
Assessment	1 4	5
Other	1 4	5

* Residential services are shaded darker

NSW (353 services)*		
Detoxification	48 69	117
Rehabilitation	79 55	134
Pharmacotherapy	19 61	80
Counselling	74 225	299
Support	77 159	236
Information	82 212	294
Assessment	65 208	273
Other	7 25	32

* Residential services are shaded darker

Northern Territory (56 services)*		
Detoxification	6 8	14
Rehabilitation	10 11	21
Pharmacotherapy	1 2	3
Counselling	11 19	30
Support	3 33	36
Information	5 18	23
Assessment	6 9	15
Other	1 18	19

* Residential services are shaded darker

Queensland (217 services)*		
Detoxification	24 38	62
Rehabilitation	42 10	52
Pharmacotherapy	4 18	22
Counselling	18 169	187
Support	7 18	25
Information	10 81	91
Assessment	6 63	69
Other	3 9	12

* Residential services are shaded darker

South Australia (88 services)*

Detoxification	6	5	11
Rehabilitation	3	7	10
Pharmacotherapy	1	6	7
Counselling	9	57	66
Support	6	43	49
Information	8	66	74
Assessment	3	51	54
Other	0	6	6

* Residential services are shaded darker

Tasmania (35 services)*

Detoxification	3	12	15
Rehabilitation	2	3	5
Pharmacotherapy	1	19	20
Counselling	6	27	33
Support	2	25	27
Information	3	6	9
Assessment	4	26	30
Other	0	17	17

* Residential services are shaded darker

Victoria (224 services)*

Detoxification	34	62	96
Rehabilitation	39	52	91
Pharmacotherapy	18	43	61
Counselling	33	160	193
Support	26	121	147
Information	19	119	138
Assessment	15	115	130
Other	4	17	21

* Residential services are shaded darker

Western Australia (130 services)*

Detoxification	15	14	29
Rehabilitation	16	26	42
Pharmacotherapy	2	4	6
Counselling	16	63	79
Support	8	51	59
Information	11	49	60
Assessment	7	33	40
Other	5	29	34

* Residential services are shaded darker

Australia as a whole (1,118 services)*		
Detoxification	140 211	351
Rehabilitation	197 165	362
Pharmacotherapy	47 156	203
Counselling	169 726	895
Support	134 455	589
Information	140 558	698
Assessment	107 509	616
Other	21 125	146

* Residential services are shaded darker

The second task: analysis and commentary

Two other steps have contributed to our analysis and conclusions: a review of published literature and research on resource allocation principles and methods in health care; and a national workshop on resource allocation, held in Sydney in August 2004 as the mapping reached its final stage.

Chapter 2 contains the literature review. We acknowledge the valued contribution Associate Professor Jim Pearse made to updating the review from recently published materials.

A summary account of the workshop may be found in Chapter 3. We are grateful for the special contributions Professor Helen Lapsley, Associate Professor Jim Pearse, Mr Gavin Stewart, Mr Hayden McDonald, and State and Australian Government participants made to these proceedings.

Chapter 4 of this report sets out the observations we made of the data, and of data collection methods, in the course of the mapping exercise; together with recommendations arising from our observations, the literature review, and discussion at the workshop.

2. A review of literature on resource allocation

We have reviewed published literature and research on the allocation of resources to alcohol, tobacco and other drug treatment services within specified budgets, across and within geographical regions. However, studies of allocation of resources specifically for ATOD treatment services are limited in quality and quantity. We therefore also examine commentary on broader issues of resource allocation in health generally, and the associated formulas that have been developed to aid this task, to see if experience in the wider context can be applied to ATOD services in Australia.

The literature reflects a variety of approaches to questions of policy and strategy. For example:

- Should government fund or subsidise certain services? Issues of safety, efficacy, effectiveness, and cost-effectiveness are relevant here, and analytic tools have been developed to address them.
- What is the best way to allocate available resources across different geographical regions (a critical question for Australia)? The literature on this aspect of resource allocation approaches is relatively well developed for general health services, but relatively undeveloped for ATOD services.
- What is the most effective way to allocate funds to specific services within a region or a State?

General principles in resource allocation decisions

Resource allocation decisions are decisions about the best use of available resources. A variety of techniques for addressing resource allocation questions can be identified within the literature. However, techniques and approaches are often specific to a particular context, and it is therefore important to consider these approaches within the broader questions of policy and strategy that are relevant at the time.

All decisions about identifying problems, and developing and choosing strategies to address them and evaluate change are guided by policy (e.g., Kramer 1976). A range of factors in turn influences policy, including:

- ethical considerations such as equity and fair process
- levels of evidence
- the perceptions and desired outcomes of different stakeholders, including pressure from the media and community groups
- attitudes of service providers
- achieving the best use of available resources (efficiency).

Equity

The equity concept has a horizontal equity component (that people in similar circumstances, with similar levels of need are treated in a broadly similar way) and vertical equity component (that people in different circumstances should be treated differently). In health, equity can be defined across a range of dimensions, but three common approaches are to consider *equity in access to services, equity in capacity to benefit* and *equity in health status* (Shaw and Smith 2001).

For example, Almond (2002) in a study of health visiting in the UK, conceives equity as equity of access:

> Equity in health visiting involves conscious and deliberate efforts to ensure and monitor whether appropriate services are provided, and are accessible to those who stand to benefit most from their uptake. This may involve making decisions that result in unequal distribution for some. Yet the standard and quality of services should be the same for all, regardless of class, position, race, disability, age or gender.

According to Almond, the defining attributes of equity are:

a. equal opportunity to access services

b. a high standard of service for everyone

c. unequal distribution of services to meet unequal need. She speaks of vertical and horizontal equity. Vertical equity, she says, 'indicates that people with *unequal* need ought to be treated in a *dissimilar* way, that is, differential treatment of unequals is required', whereas horizontal equity 'means that people with equal need be treated equally.'

'The most dominant theme within the literature on equity,' she says, 'is that services should be based on need', but qualifies this by reference to Eaves (1998), who argued that 'if equity is to be promoted in health services, policies are needed to ensure that resources are distributed effectively and directed at those who not only need them the most, but are expected to benefit the most.'

In judging the extent to which equity is sought or achieved, a number of measures may be drawn from Almond's work:

- policies are analysed to see if they promote the defining attributes of equity
- needs assessment models and methods are collated and analysed to judge their adequacy to identify those in most need
- records are examined to determine the uptake and use of services by social class, ethnic group, age, etc.
- providers are invited to join focus groups to discuss clients' views about assessing and prioritising needs, and the skills and resources needed to meet these needs
- clients are interviewed to explore whether the service adequately meets their needs sensitively
- the records of funders and providers are examined to assess whether the distribution of services is fair and just, and target those who can benefit most
- observations are made to determine whether some providers spend more or less time with certain clients, and whether these patterns relate to needs criteria or to other factors (Almond 2002).

In the Australian context, Indigenous Australians are one of the most relevant special needs groups. Charlesworth and Gifford (1992) in their summary of the Australian Health Ethics Committee workshop, *The place of ethics in health care resource allocation. Where to now?* say:

> A further complication in the Australian health system is that the Australian Aboriginal and Torres Strait Islander population have different health needs and that the development of a health system for them ... will work in a very different way.

Fairness in decision-making and priority setting

Martin, Giacomini and Singer (2002) reviewed elements of fairness in decision-making and priority setting. They argue that all the stakeholders should participate in decisions, and the processes involved in making decisions are available for all to scrutinise. Further, all stakeholders should be accorded the same level of importance in the decision-making process. They describe four conditions of fairness in this regard:

- *Publicity* condition: 'rationales for priority setting decisions must be publicly accessible'
- *Relevance* condition: 'these rationales must be considered by fair-minded people to be relevant to priority setting in that context'
- *Appeals* condition: 'there must be an avenue for appealing against these decisions and their rationales'
- *Enforcement* condition: 'there must be some means, either voluntary or regulatory, of ensuring that the first three conditions are met'.

Martin et al. (2002) surveyed decisions makers involved in two major areas of health care, and on this basis included in the notion of *relevance* an argument for consensus rather than 'majority or elite rule', yet ensuring that multiple perspectives are represented, which can sometimes require the input of an outside expert.

Levels of evidence

Policy is guided not only by principles but also by information gathered through research and the opinions of experts. When decisions are based on up-to-date information about A problems and the most effective means of addressing them, it becomes possible to make rational judgments about the impact of current policy, the reasons underlying the success or failure of various strategies, and possible future directions.

This was the approach of papers presented at a 1996 conference on *Integrating health outcomes measurement in routine health care*. The speakers focused on establishing links between outcomes research, priority setting and resource allocation (Eager 1996). Maxwell et al. (1997) present an example of the use of a needs assessment model to determine resource allocation. The Texas Commission on Alcohol and Drug Abuse, they say, funds programs that not only aim to reduce risk, but also focus on increasing resilience. The extent of need is determined by looking at resilience and risk factors identified through research. Using these measures, needs assessment, policy and resource allocation are strongly linked. Similarly, the ANCD has recently released a report on the macro-environmental influences or structural determinants on youth drug use (Spooner, Hall and Lynskey 2001). The report highlights the need to address social, economic and physical factors that lead to youth drug use to increase the efficacy of interventions. Research such as this is important because it drives a holistic approach to decreasing drug use, one that can be reflected in funding decisions.

Horton (2002) argues that the intention of the UK Government to 'close the gaps in health status between rich and poor' will not be achieved unless the government increases 'the evidence base for policy decisions about health inequalities' and resolves to increase coherence in government policy. Horton concludes: 'Without new research into interventions, much of this effort will flounder in a quagmire of unevaluated projects and programmes.'

When resource allocation is based on assessment of need, and the assessment of need is grounded in research that identifies specific issues that should be addressed to bring about desired change, it is more likely that interventions will be effective, their impact will be understood, and developments will follow a logical progression.

The perspectives of stakeholders

Sason (1987) compared the different views held by politicians, community members, and experts in the field on the level of burden of illness of various types of drugs, and identified and compared the differing policies and resource allocations that would be made by each of these three groups.

Sanson-Fisher et al. (1988) conducted a similar study comparing the opinions of politicians, experts, and members of the community on the level of burden imposed by different drugs on society. They found that politicians and community members tended to agree, while experts in the field ranked drugs differently in line with the mortality rates for different drugs. Sanson-Fisher et al. pointed out that perceptions of level of burden imposed by different drugs affect the types of policy and resource allocations decisions that different groups would make.

The influence of stakeholders

Policy is influenced by the perspectives of individuals and groups from diverse backgrounds who represent the body of stakeholders. While some researchers argue for *objective* decisions based on data alone, a growing trend is arguments in favour of greater stakeholder involvement in decision-making. Whiteford (2000) discusses how community groups and media pressure influence decisions about the allocation of resources. His response is to recommend continuing use of epidemiological data to identify met and unmet need within the health system to ensure that decision-making was objective and evidence-based.

However, other researchers have argued in favour of greater stakeholder involvement. For example, Simpson and Sutton (1997) used students' responses to identify desired outcomes for alcohol and drug interventions. They asked students to attach values to different 'end products' of drug interventions. The value attached to prevention of premature death outweighed the value attached to the prevention of burglary by between 100:1 and 550:1. These weightings were inconsistent with current resource allocation to relevant interventions. On this basis, the authors argued that resource allocation should be brought more in line with desired outcomes as identified by relevant stakeholders.

Campbell (2002) also argued for greater involvement of key stakeholders in policy development. He investigated the impact of mental health consumers' involvement in identifying outcome indicators and evaluating services. If consumers were involved at this level, with implications for policy and service delivery, Campbell said it seemed appropriate they should also be involved in identifying the factors that contribute to any indices of level of need. By contrast, some recent commentators (Lomas 1997, Deber and Sharpe 1999, Feldberg and Vipond 1999) document large gaps between the ethical- consumerist emphasis on patient autonomy, and the reality of what patients actually want and seek in health care, or the service priorities they prefer.

Consumer participation in decisions takes place on two distinct levels: partnership in decisions about their own or their families' care and treatment; and a formative role in decisions about service planning, resource allocation, access, community priorities, and evaluation. Many governments have established information services for patients and the public. For example, the UK launched its NHS Direct initiative in 1999 as 'an important advance in improving public access to information about health, illness and the NHS ... Arrangements will be put in place to assist the general public in accessing consistent, comprehensive, comprehensible and up-to-date advice from accredited sources on a wide range of health related issues' (NHS 1998). In Australia, the Commonwealth's HealthInsite is designed to 'provide Australians with the most current and reliable information from reputable leaders in the national and international health fields' (http://www.healthinsite.gov.au).

This aspect of information entails diverse motives, guiding values and assumptions. Motives include a desire by governments to involve the community in the difficult rationing decisions facing publicly funded health systems; consumerism, coinciding with cultural shifts in the status of the health professions; and acknowledgment that the person who experiences treatment is the only one who can really assess if the information he or she obtains is adequate for decision-making, and thus for physical, psychological and social well being.

There is considerable evidence from other countries that average consumers do not uniformly welcome the drive by consumer advocates for their active participation. Lomas (1997) reports on his work in Canada, and quotes experience in New Zealand and the UK, where citizens have voiced reluctance to become involved in decisions about resource allocation, wishing to be involved only in setting the principles and values that will guide the decision-making. Lomas points out that:

- we are taxpayers with views about what health care the state should fund
- we are patients with preferences about what diagnostic and treatment interventions we want to receive
- we are patients with views about the quality of the care we or our families receive
- we are patients who choose to stay or not stay with a provider
- we are local citizens with views about the range of health services we think should be provided near where we live.

Research and experience show there is not necessarily any logical consistency in the preferences expressed independently in each of these domains.

Transparency

There is a growing trend to make funding and spending in the health care system a transparent process, where such information is provided to the public. Marshall et al. (2000) reviewed the literature on the growing trend to make performance data public. After some years, they say, there is still no consistently articulated rationale for the practice. The most common belief is 'that such data will promote an efficient market economy in health care ... in the belief that information about performance will encourage consumers to choose to access high-quality providers.' But individual consumers make very little use of this kind of performance data. The reasons for consumers' lack of interest in and use of performance data include difficulty in understanding the information, disinterest in the kind of information, little trust in the data, problems with timely access, and the fact that they have little choice anyway. 'There is evidence from descriptive studies that consumers rate anecdotal evidence from family and friends more highly than empirical evidence.'

There appears to be no best method for obtaining public input that overcomes the common problems of poor information on which to base priorities, difficulty in reaching consensus, poor representativeness of participants, and lack of opportunity for informed discussion before declaring priorities. Aggregative consumer participation is problematic, as reflected by social choice theory.

Social Choice Theory is an economic theory that is a branch of decision theory concerning people who all agree to be bound by the outcome of a social choice procedure, such as a vote (Davies, 2002). The major problem with social choice theory is that it is impossible to find a manner of aggregating the preference of each individual in a fair manner. There is some suggestion that panels of citizens or patients, convened on a continuing basis and provided with the opportunity to acquire relevant information and discuss its implications before making consensus recommendations, offer the most promising way forward (Lomas 1997).

Evidence-based medicine

Another crucial issue is the drive to 'evidence-based' medicine and resource allocation. There is debate about the effect of an evidence-based policy on consumer information. Despite good intentions and real gains, much of the 'evidence' used in health care is still probable or uncertain, and final decisions are still value judgments. Some authors caution that science runs the risk of wanting to codify and regulate decision-making at the individual and at the funding level, in ways that are potentially against the interests of consumers (Hope 1996). Sometimes what is not at all cost-effective at the population level may be the preferred choice in individual cases. Information for consumers has to address their values and preferences as individuals facing uncertain treatment choices; value the decisions made by communities and governments in deciding what services should be publicly funded; complex issues of treatments that can be effective, but not cost-effective; and so on.

The influence of attitudes

Researchers have investigated differing attitudes regarding treatments and treatment outcomes, which in turn has an influence on decisions about allocating resources (which treatment interventions, programs or services to fund). Renner (1983), for example, discussed methadone maintenance and alternative treatments, and highlighted the sometimes conflicting treatment goals of consumers, staff, community groups, law enforcement agencies, government bodies and funding agencies.

Carnwath et al. (1998) studied GP attitudes towards opiate users and their treatment across three neighbouring districts that varied socio-demographically, and found that younger GPs who had more experience in working with opiate users had more positive attitudes. On the basis of these findings the authors argued that attitudes of providers needed to be addressed before targets could be established and resources allocated.

Lindholm (1997) also studied the effect of attitudes. He investigated the role of lead agencies in implementing a substance abuse intervention and the conflicts that arose among lead agencies and local organisations, and concluded that issues of race and class were the primary keys to identifying areas of conflict.

Other principles in developing resource allocation policies

Groups developing resource allocation formulas have sometimes sought to articulate a set of principles or criteria to be used in assessing components of a formula.

The following is a set of principles recently adopted by the NSW Health Resource Distribution Formula Advisory Committee.

Criteria for guiding development of resource allocation formula

Criteria	Description
Technical robustness	The methodology and analysis undertaken in developing the factor withstand critical appraisal
Minimising unintended incentives	Any factor included in the formula should minimise incentives which conflict with the appropriate operation of health services
Comprehensibility	The overall model should be understandable to those without a technical background
Transparency and objectivity of the formula	Any adjustments made to the formula should be made clear, and the model should be capable of objective assessment
Materiality	Revisions to the model should be set against the impact on population shares
Use of reliable and up-to-date data	As far as possible, the model should reflect data from the latest period available
Stability and durability	The formula should demonstrate reasonable stability over time, with changes in implied shares for Area Health Services clearly explained

Source: NSW Health

Resource allocation and performance management

While good resources allocation processes may be a necessary step in achieving best use of resources, they are not always intended to ensure or capable of ensuring that ultimately resources will be used appropriately. How resources are ultimately used will rely on an appropriate system of performance management. Some researchers (e.g., Bindman et al. 2000; Sheldon, 1997) argue that inequity occurs not only in the allocation of resources, but also in how resources are used. Sheldon's comment was that 'formula fever has distracted attention from the now more important issue of how the allocated resources are spent. Health authorities ... should focus their attention on whether current spending patterns reinforce socially produced inequalities and, if so, doing something about this at the local level' (1997).

Implementing change

Commenting on changes that occurred as a result of the new resource allocation formula (RAF) used by the NSW Health Department, Hindle (2002a, 48) says:

> It was agreed that the model should not be fully implemented immediately, because of the high level of investment in infrastructure. Most obvious, the teaching hospitals in central Sydney could not suddenly be closed or reduced significantly in size, and the equivalent infrastructure created in growing areas, without major losses in efficiency and effectiveness. The RAF would therefore be progressively implemented over several years, as opportunities arose to do so without loss of performance of the health care system as a whole. It was envisaged that the transitional period would be ten years.

Hindle (2002a, 48–9) also details the history of the development of the RAF (later called the *Resource Distribution Formula* following further changes) from the 1970s to the present.

The lessons learned from the experiences of the NSW Health Department, and also from the UK Health System, include:

a. that resource allocation formulas develop over time

b. changes made on the basis of new resource allocation formulas should be systematic and gradual.

Taking these considerations into account, these two elements (the development of an appropriate resource allocation formula and changes within the relevant system) should form a feedback loop, evolving in response to the lessons learned from changes in each, as well as from new developments in areas of relevance and ongoing research. Two useful approaches involve comparing observed with expected measures, and examining areas of over- and under-spending.

Deciding which types of intervention are to be supported

Many government programs face fundamental questions concerning the types of interventions that are to be supported and the appropriate mix of those interventions. These questions are often posed at a national or State level, rather than a local level. Addressing these questions often requires significant resources, either in gathering and synthesising available evidence, or in commissioning research to address unresolved questions. Some countries have formalised this process by creating a specific institution to coordinate assessments. The National Institute for Clinical Evidence (NICE) performs this role for the United Kingdom. Most western countries now have formal processes for assessing pharmaceuticals and new technology, but approaches to assessing other interventions are not as well developed.

In addition to assessing evidence concerning efficacy and effectiveness — to achieve the best use of available resources — these assessment processes need to consider the relative cost-effectiveness of interventions. Economic evaluations may be defined as ' ... the identification, measurement, and valuation, and then comparison of the costs (inputs) and benefits (outcomes) of two or more alternative PSU treatments or activities' (World Health Organisation 2000). Two defining features of full economic evaluations are that they compare two or more alternatives, and both the costs and the benefits of the alternatives must be considered.

Four types of economic analysis — cost-minimisation, cost-effectiveness, cost-utility, and cost-benefit — are common modes of evaluation.

Cost-minimisation analysis (CMA)

Cost-minimisation analysis compares two or more treatments and selects the treatment that is administered at the least cost. The basic assumption is that the effect of alternative interventions on health related quantity and quality of life are equal. Alternatively, a number of published cost-minimisation analyses measure the consequences of each intervention in monetary terms — for example, reduced future levels of crime or health care costs — and subtract this from the cost. The major advantage of this approach is that it reduces the comparison of different treatment alternatives to a pure contrast between resource consequences. However, the assumption that the outcomes of alternative interventions are equal is erroneous. This type of analysis therefore has limited application.

Cost-effectiveness analysis (CEA)

Cost-effectiveness analysis constructs a ratio of the monetary cost of single natural health units to compare two treatment options. The analysis considers the benefit of each treatment in terms of a single natural health unit — for example, deaths avoided or years of life gained. The single natural health unit must be the same for each treatment. The costs of treatment are measured in monetary terms. This method entails a number of shortcomings. First, by limiting the evaluation of a treatment to one health outcome, it fails to capture all the effects of the treatment. For example, a potential benefit of a treatment may be that it reduces crime, but the natural health unit would not capture this benefit. As a consequence of the narrow scope of the evaluations, governments and other funders of treatment programs make only limited use of CEA studies.

Cost-utility analysis (CUA)

Cost-utility analysis overcomes the shortcomings of having a single outcome measure by combining treatment outcomes in to a single measure that captures both quality and quantity of life. This type of analysis is most suitable when quality of life is the most important outcome, or the treatment affects both the quality and quantity of life for the patients, or where treatments have a range of different outcomes and a comparison between them is necessary. A health utility measure must identify, measure and value extensions to life or gains in quality of life, and also estimate how long these treatment effects will last.

A commonly used measure in CUA is quality adjusted life years (QALYs). The QALY assigns a score of 1.000 to a (hypothetical) person who is in perfect health. Deductions are taken from 1.000 for every symptom that detracts from quality of life. For example, wheezing or shortness of breath may attract a quality of life deduction of 0.275. It should be noted that QALY measures are not standardised across studies. The value of the deduction and the health domains assessed typically vary across studies and measures; this constitutes a major shortcoming of this type of analysis. Costs and resource consequences are constructed in a way similar to other economic evaluations. The final utility of the program is assessed by comparing the average cost per QALY for each measure (total program costs ($)/QALYs gained).

Cost-benefit analysis (CBA)

The major advantage of cost-benefit analysis is that it measures both the costs and the benefits of different treatment programs in monetary terms. A broad range of treatment outcomes may be captured in this analysis. As a result, cost- benefit analyses are particularly powerful in influencing the funding and resource allocation decisions. However, measuring some outcomes, and health gains in particular, in monetary terms is problematic. Early work focused on the market value of life based on forgone earnings. This method is rarely used now because it undervalues certain social groups. An alternative measure asks individuals to put a monetary value on different health statuses using a willingness to pay approach. Inherent in this method is a weighting for different subgroups of the population according to their income status, and is most useful for health care systems in which individuals incur the costs of health care. More complex approaches combine health utility measures and monetary evaluations. For example, one method applies a dollar value to QALYs calculated for different age, gender and race cohorts.

Cost-benefit analyses of different treatments

Cost-benefit analysis relies on evaluation of the costs associated with an intervention, the outcomes achieved by that intervention, and the formulation of a single measure for comparison across different interventions. Several researchers have addressed these issues separately or together.

Rundell and Paredes (1979), for example, discuss the use of *social profitability analysis* in determining the relative costs and benefits of different interventions, and argue for the use of a 'common metric (dollars)' to facilitate comparisons between interventions.

A study by Sheffet et al. (1982) compared the cost-benefit of different treatment centres for drug addiction. The authors compared treatment outcomes (using a psychosocial questionnaire) with treatment costs (probable length of stay, treatment retention rates, costs per week), and argued that their devised formula enabled them to compare treatment centres on the basis of outcomes, or to calculate the cost-benefit ratios by type of consumer. In a similar approach, Flynn et al. (1999) conducted a cost-benefit analysis of two different cocaine treatments, comparing the cost of administering the program to the benefit of the programs in terms of crime avoided. This approach was useful in that it used a dollar estimate of the tangible cost of crime to compare to the costs of the program.

Chatterji et al. (2001) used another method of cost-benefit analysis, the *economic cost analysis*, in a study of school-based prevention programs. Shepard, Larson and Hoffman (1999) and Schwappach (2002) offer detailed discussions of the use of the QALY measure in cost-effectiveness analysis. French (1995) gives an overview of the various methods for conducting economic evaluations of drug abuse treatment programs.

Considerations when conducting an economic evaluation

The following represents a comprehensive list of costs and benefits that may be considered when an economic evaluation is undertaken. The scope of the analysis may be determined partly by whether costs are estimated purely from the health care providers' perspectives, or from the perspective of the consumers and wider community as well. A related controversy is whether to include the cost of lost productivity arising from unemployment while treatment occurs. Benefits may be classified as direct health benefits to the individual, non-health improvements in quality of life for the individual and family, reduced use of other health care facilities, benefits to other agencies, or productivity benefits.

Costs and benefits may be evaluated in a number of different ways. For example, many economic evaluations apply adjustments to costs and benefits depending on when they occur. Thus, benefits that occur in the distant future may be discounted relative to benefits gained in the immediate future. Incremental costs and benefits also must be considered. Generally, an economic evaluation compares costs and benefits via a single unit of evaluation. However, economic evaluations also must consider how costs and benefits vary as the level of treatment changes. For example, an existing treatment may produce a range of favourable outcomes in a cost-effective manner, but if the service had to expand to meet the needs of an extra fifty patients, the cost-effectiveness of the outcomes might be reduced by the extra costs imposed on the providers.

Costs	Benefits
Costs to service providers Capital • land • buildings • equipment Running costs • paid staff • volunteers • administrative and managerial costs • consumables including drugs prescribed and their dispensing costs, toxicology costs, etc.	**Direct health benefits to the individual** Quality and quantity of health improvements • exact measurement depending on economic analysis type • associated with reduction in drug use • reduced risk of injection-transmitted disease • more healthy lifestyle in general • less adverse effects of treatment
Costs to the individuals and their families in treatment Out of pocket expenses • travelling and other direct expenses • contribution to treatment costs	**Non-health improvements in quality of life for the individual and family** • reduction in condition-related violence • improvements in social functioning • other benefits to the family
Costs to other agencies or individuals Referrals to other health or social agencies linked to the treatment Increases in potential problems associated with treatment (e.g., leakage of prescribed drugs to illicit markets	**Benefits to other agencies** Reduced use of other health care interventions
Productivity costs	**Productivity benefits** Reduced use of resources from other social care and welfare services Reduced criminal justice system costs Benefits net of any adverse consequences to 'community and social environment' Benefits in individual productivity as a result of the treatment

To be able to compare benefits across different treatments or services, a common measure must be used. Several have been identified in the literature. For example, Bury-Maynard (1999), Ament and Baltussen (1997) and Schwappach (2002) discuss the use of a quality adjusted life year (QALY) to assess the relative worth of different interventions. Calculation of this measure is based on a utility index that ranks outcomes from interventions based on societal values.

In the absence of a common metric such as the QALY, some health economists have advocated the use of Program Budgeting and Marginal Analysis (PBMA) (Mooney, Russell and Weir 1986; Mitton and Donaldson 2001, 2003a, 2003b, 2004; Mitton and Patten 2004). PBMA has a relatively long history as a tool for priority setting at a regional health authority level. The approach is a practical application of the concept of opportunity cost in the context of decision-making. Typically, PBMA is made operational in five stages:

1. Clarify the resource limits for the organisation – what resources are available in total? Typically this will involve consideration of budget allocations set by external funding agencies, but in some cases opportunities will exist to raise alternative sources of revenue.
2. Analyse the current distribution of resources across broad programs. This is the 'program budgeting' component of PBMA. The approach does not specify how programs might be defined, but programs should be established to reflect where decisions on allocations between services or outputs are most likely to be important.
3. Identify the main candidate proposals for increased resources: identify both the level of resources and benefits associated with each of these proposals.
4. Identify areas of care that could be provided with fewer resources. These fall into two categories:
   a. where the same level of benefit could be maintained with fewer resources
   b. where fewer resources might result in marginally lower levels of health benefit (but candidates for increased resources will produce greater health benefits).
5. Compare the proposals for increased or decreased resources against available resources. Allocate resources to those proposals that will maximise benefits within the current resource limits. This entails reallocating resources from Proposal 4, where the benefits from Proposal 3 will be greater.

The PBMA approach deliberately leaves open the question of how benefits are assessed or quantified. Ultimately the valuation of benefits is seen to be a role for the health authority. Benefits are seen to include a range of benefits other than 'health maximisation'. PBMA has been applied in a wide range of settings (Mitton and Donaldson 2001).

Shepard, Larson and Hoffmann (1999) propose another approach proposed that uses 'additional abstinent years' as an outcome measure, and takes into account the severity of illness experienced by consumers. Wiersma and Van Busschbach (2001) look at three outcome measures for mental health services: quality of life, satisfaction with service, and unmet needs. Unmet needs are found to be associated with quality of life, diagnosis, and cognitive functioning. The authors argue for the tailoring of services to meet specific needs (e.g., for information, social contacts, and daily activities).

Prendergast and Podus (2000) provide a detailed discussion of methods of assessing the relative merits (e.g., efficiency and effectiveness) of different ATOD treatment approaches within the framework of treatment models: the disease model, the moral model, the crime model, the public welfare model, the employment model, and the harm reduction model.

Are different approaches more cost-effective and better suited to the specific needs of individual consumers or groups of consumers?

To be efficient and effective, interventions must be matched to the needs of consumers, and the most cost-effective of the range of available options suitable to meet consumer needs must be employed. Identification of appropriate interventions typically is based on relevant research (evidence-based practice).

Practice guidelines based on research in Victoria set out the range of alternatives for detoxification from drugs and alcohol, and emphasise the need to match treatment to the particular individual and his or her circumstances. Many health professionals remain unfamiliar with the diversity of interventions and appropriate assessments. As a result, the most cost-effective treatment is often not used (Wood and Pead 1995).

Haaga (2000) and Humphreys (2002) advise using different approaches based on the severity of symptoms and consumers' capacity to engage in self-help activities. Haaga believes some patients benefit from less costly interventions, such as participation in psycho-educational groups. Humphreys says that self-help groups provide a cost-effective alternative for those clients who experience less severe problems.

This general approach to care is termed a s*tepped care approach* to intervention, and parallels the model proposed by Uehara, Smukler and Newman (1994) of allocating resources according to the level of care likely to be required by consumers with varying levels of dysfunction.

Are some types of services more suited to the specific needs of significant groups of consumers?

As well as matching treatments to consumer needs, providers may be matched to significant sub-groups of consumers. Choices may be made between providing funds to existing ATOD services to enable them to more effectively work with local Indigenous or migrant communities (for example, by employing liaison officers), or providing funds to services already working with selected sub-groups (for example, funding the position of an ATOD-specific position within an organisation already working closely with the target group).

Issues in providing specific interventions to meet the needs of Indigenous Australians are of special and urgent importance (e.g., NATSIHC 2000; Charlesworth and Gifford 1992; Mooney, Jan and Wiseman 2002). Research in the U.S. (e.g., Amey and Albrecht 1998) suggests that correlates of substance use in white communities may not be the same as correlates of substance use in minority groups. Interventions that are effective when working with one sub-group may not be effective when working with another.

Problems with over-generalising from one sub-group to another

Although some interventions and services may be cost-effective for one sub-group, they may not be cost-effective for other sub-groups. A number of researchers, including Ford and Schmittdiel (1983) and Wiersma and Van Busschbach (2001) have argued for the matching of interventions to the needs of different consumer groups. Where mismatches between need and intervention or service occur, maximum benefits will not be seen in response to resources spent. This being the case, interventions and services that demonstrated equal use of resources may not demonstrate equal effectiveness.

Measuring benefits/ desired outcomes

To determine whether or not a specific intervention is effective (that is, has achieved its goal), the intervention's desired outcomes must be identified. As we have seen, identifying these outcomes is determined not only by research, but also by ethical considerations, pressure from community groups and the media, the perceptions of different stakeholders (including consumers), research, and the attitudes of service providers.

Reciprocal relationship between selection of outcome measures and selection of treatments

Specific treatments aim to bring about specific changes, and outcome measures are selected to measure these changes. However, when an outcome measure is chosen there may be a shift in the type of intervention used, so that service providers can demonstrate their effectiveness (Brown, McCartney and Bell 1995). Further, with the rise of the consumer movement, consumers are becoming increasingly involved in identifying desirable outcomes and treatments appropriate to achieve those outcomes (e.g., Hill 1998). There has been a corresponding shift toward subjective measures and assessments of consumer satisfaction and quality of life, with a parallel shift toward interventions that try to influence the variables underlying these measures.

Bracke (2001) discussed the use of subjective well-being as an outcome measure, and pointed out that this factor, like any other outcome measure, is related to assessment of need, and subsequently to resource allocation.

Wiersma and Van Busschbach (2001) looked at three outcome measures for mental health services: quality of life, satisfaction with service, and unmet needs. Unmet needs were found to be associated with quality of life, diagnosis, and cognitive functioning. The authors argued that services should be tailored to meet the specific needs identified (e.g., for information, social contacts, and daily activities). Barak et al. (2001) conducted a study of consumer satisfaction in relation to an adult psychiatric outpatient clinic. Of the variables measures, psycho-education was the only one related to consumer satisfaction. With an emphasis on the importance of consumer satisfaction, it would follow that, as a result of such a finding, recommendations would be made to target psycho-education as a significant intervention.

Allocating resources across regions

Judge and Mays (1994a) argue that: 'resources should be matched to the relative needs of populations. Without this, geographical equity cannot be achieved.' Formulas for determining allocation of resources to geographical regions typically include one or more of the following factors:

- regional population size
- variation in the level of need in different regions (relative need)
- variation in the cost of providing services to different regions (relative cost).

Sources of information for assessing needs

Issues entailed in selecting sources of information include the cost and difficulty of obtaining it; the recency, coverage or completeness of the data; and how often it is updated.

Existing data collections

One of the least costly means of accessing information on indicators is by using existing databases, including census data, social security data, and hospital and other health facility records.

Census data

Although census data is relatively easy and inexpensive to access, one of its major problems is that often the information is not current. Carr-Hill et al. (2002) criticise the use of census data 'which are often out of date and include proxy measures of household income such as car ownership.' The Australian Bureau of Statistics (ABS) conducts a census every five years.

Social security data

Carr-Hill et al. (2002) investigated the use of social security data in predicting use of services in Northern Ireland, arguing that 'it is widely acknowledged that understanding of the association between socioeconomic standing, health status, and the need for health services would be enhanced if data directly reflecting income levels were more readily available.' The social security data were extracted from hospital ward data, and included 'recipients of income support and family credit. (Family credit was paid to families in which the head of household was in a low paid job, and has been superseded by the working families' tax credit).'

Because of the relationship between supply and use of services, Carr-Hill et al. (2002) initially partialled out the effect of supply of services on use, and subsequently the effects of any socio-demographic variables that affected use through supply. Initially 34 socio-economic variables were considered. A second regression analysis was then conducted investigating the effects of the remaining socio-demographic variables on use of services. Use of inpatient hospital services was most strongly related to the standardised mortality ratio, family credit, and income support. They then compared models for resource allocation. The models either did or did not include the social security variables (income support and family credit), and reported that the effect of including the information on income via social security benefits had the effect of moving 'resources from the board centered on Belfast to those serving primarily rural parts of Northern Ireland.' The authors argued that this redistribution represented a fairer and more equitable allocation of resources.

Hospital and other health service records

These records provide measures of service use, and cannot be used in isolation as indicators of need. However, used in conjunction with other indicators of need, information obtained from hospital records may contribute to estimations of need within regions. Hospital morbidity data contains detailed information on the diagnoses of people admitted to hospital, and this information can be used in examining issues specific to ATOD programs. In recent years, data collections for a range of health services have been developed, with more detailed information related to clients of mental health services and drug and other alcohol services.

Specific surveys

The benefit of surveys constructed to address specific issues is that they provide information at the level of the individual, and that typically provides a more direct measure of the variables of interest. The major drawback is the cost involved in conducting a survey that is representative of the population of interest. In particular, it is very difficult to reach sample sizes that are big enough to achieve results that can detect relevant differences between regions.

Surveys vs social indicators extracted from existing data collections

Studies have shown that use of social indicator variables extracted from existing databases provides estimates of need comparable to estimates provided by surveys. However, extraction of existing data is cheaper than conducting surveys, making the former method more cost-effective. Research by Kim et al. (1998a–c) is relevant to this issue.

Kim et al. (1998b) identified a range of preventive and risk factors from the literature and used a composite of these to develop an aggregate COMRISK index score at the county level. Using this as a basis for further calculations, the authors devised a Prevention Needs Index (PNI). Kim et al. (1998a) further examined data from two databases: a statewide student drug survey, and social indicators from routine data collections. Four resource allocation algorithms were developed and based on: county-based composite drug use index (COMDRUG), the Institute of Medicine's definition of prevention target populations, a composite risk factor index score, and the set of social indicators.

The first three measures were based on data from the student survey. Kim et al. (1998c) then compared the suggested funding levels produced by each of the four resource allocation algorithms, and found that they were highly correlated — that is, funding levels based on survey data were highly similar to funding levels based on social indicators.

Other research by Lesage et al. (1996) investigated issues in estimating need for psychiatric care using survey data, service use data, social indicators, and a case-control study. They concluded that the use of social indicators provided the most 'sensible distribution of human resources', even though all methods of assessing need underestimated the 'severity of caseloads'.

Regional population size

A common starting point for regional allocation models is information on populations living in the region, or on specific target group populations in the region. (For example, the Australian Government's approach to planning services for residential aged care uses populations aged over 70 years as a measure of need.) However, it is widely recognised that per capita funding alone, or approaches based simply on demographic characteristics such as sex and age, do not adequately reflect variations in health care needs.

Variation in the level of need in different regions

A range of approaches, referred to variously as population-based needs funding, risk-adjusted capitation, weighted capitation, or predictive modelling has been developed to adjust health service allocations to capture individual or population characteristics that affect health care needs. These approaches generally reflect the objective of achieving equivalent access to health care services for populations with equivalent health care needs (Shaw and Smith 2001; Hauck et al. 2002).

Risk-adjusted capitation

Risk-adjusted capitation approaches are used in funding geographic health authorities, for example in New South Wales, the English National Health Service (NHS), Scotland, Wales and Northern Ireland, various Canadian provinces, New Zealand and Italy (Rice and Smith 2001).

Weighted capitation

Relationships between indicators of need and socio-demographic data at the national level are often used to calculate regional levels of need based on the socio-demographic composition of the region. The assumption in this approach is that regional variations do not alter the relationship between the variables measured at the national level. The type of statistic used is typically non-parametric with expected numbers (e.g., within age group by region cells) predicted by observed numbers (e.g., within age groups at the State or national level).

This approach forms the initial stage of the weighted capitation formula for the allocation of resources to regional health authorities in the UK National Health Service (NHS), and involves calculating the use of hospitals services by individuals in different age groups at the national level. The expected use of hospitals' services in each region is then calculated by weighting the number of individuals in each age group at the regional level by the national rate of hospital bed use for the same age group (the *age-cost weights*) (see Judge and Mays 1994b, for further discussion). The assumption inherent in this approach is that the rate of use of hospitals should be the same across all regions for a particular age group. After estimating variation based on these demographic factors, other adjustments are then made based on regional specific indicators.

Other factors are typically introduced into resource allocation models, reflecting variation in need over and above demographic composition. Factors typically included are:

- relative mortality rates
- directly measured morbidity
- relative disability status
- socio-economic factors such as levels of unemployment, relative income levels, and housing circumstances
- household composition such as single parent families; and single elderly persons living alone
- ethnicity such as indigenous status
- geographic location.

Selection of need factors is often complex. Data are often in short supply and empirical evidence on appropriate need factors is sparse, dated or ambiguous in its implications (Rice and Smith 2001). A major empirical challenge is to assess the relative importance of these factors in driving differences in need. Many systems assess the influence of these factors based on empirical modelling. Expert judgment is also sometimes used.

Many health systems do not have access to rich diagnostic data at the individual level, or comprehensive survey data. As a result, another approach has been to observe variations in health needs for groups living in different localities, and try to identify the characteristics of those populations that best account for the variations.

Both the UK NHS (Carr-Hill et al. 1994a) and NSW Health systems use small area modelling to estimate the relative importance of factors influencing the need for hospital services. The objective of these empirical models is to explain what drives variation in use of hospital services independent of the supply of hospital services.

Several approaches have been developed that attempt to directly assess *morbidity* of populations using diagnostic information included in claims or records of health service encounters – for example, Diagnostic Cost Groups (DCGs), Adjusted Clinical Groups (ACGs) and Clinical Risk Groups (CRGs) (Van de Ven and Ellis 2000) These diagnosis-based risk adjustment schemes represent an attempt to measure morbidity of individuals or populations directly.

Others have advocated directly measuring morbidity through (for example) the use of survey and other data sources to estimate difference in the level of morbidity for certain conditions in different populations (Normand et al. 2002; Asthana et al. 2004). At present, these proposals are largely theoretical, and have not been implemented except for some limited condition-specific programs. A major challenge for these approaches is the unavailability of comprehensive data on disease prevalence, including comorbidity effects, which has a clear relationship to resource use. For example, Asthana et al. (2004) illustrate a morbidity based with coronary heart disease using data from an English health survey, but an extension of their methods to all conditions (and comorbid conditions) would not be technically possible without significant enhancement of the underlying data. Normand et al. (2002) discuss the feasibility of achieving such an extension and conclude it would be feasible, but require significant investment.

The development of resource allocation models for mental health services is one area where estimation of needs has focused on specific conditions. In the U.S. (e.g., Ciarlo and Tweed 1992), the UK (Smith, Sheldon and Martin 1996), some States in Australia (e.g., Meadow 1997), and other jurisdictions, resource allocation models have been developed specifically for mental health services (sometimes incorporating substance use treatment programs).

Burgess et al. (2003) discuss a method of synthetic estimation for deriving estimates of prevalence of people with mental health disorders in Australian regions. Using data from the National Survey of Mental Health and Wellbeing, they estimate prevalence rates across a range of socio-demographic groupings including age, sex, marital status, and rurality. These prevalence rates are then applied to census data for defined geographic regions to estimate prevalence within specific regions. A potential criticism of this approach is that it does not capture variation in prevalence owing to other factors. Actual prevalence in a particular region may vary significantly from that estimated because of unobserved factors.

Service use

In attempting to provide services to meet the needs of communities, policy makers and researchers have sometimes employed measures of service use (for example, the number of occupied bed days) and previous spending as direct indicators of the level of need. This is sometimes referred to as 'expressed demand'. The validity of these measures as indicators of need has been questioned.

Service usage is not necessarily an indicator of underlying need. For example, people needing a service may not be in a position to gain access to that service, as it may not be available in a local region. On the other hand, people with relatively low levels of need may be able to access a service easily when there is an over-supply in the local area. A range of factors may mediate the relationship between need for services and use of services, including:

- relative supply of services in the local region (Carr-Hill et al. 1994b)
- lines and means of transport (Sherman, Gillespie and Diaz 1996)
- barriers to seeking treatment. For example, Regier et al. (1984) found that 45% of adults in the Baltimore region who had a significant alcohol, drug or mental health problems did not access services. They also reported on the findings of the National Institute of Mental Health's Epidemiologic Catchment Area (ECA) Program, where large-scale face-to-face and telephone interviews were conducted. The most significant finding was that '74 percent of persons with a recent DIS [Diagnostic Interview Schedule of the DSM III] diagnosis did not seek treatment during a 6 month interval.' The authors identified factors that break down the relationship between 'demand for service' and 'need for care'; including variation across individuals in their interpretations of their own need for care, and the pressure exerted by services operating in free-market systems to increase demand so as to increase profit. Richmond (1993) discussed difficulties experienced by subgroups, such as migrants and unemployed youth, in accessing a range of interventions available to control the use of tobacco.
- higher levels of health literacy in more advantaged members of the community. For example, Sheldon (1997) argues that 'research based on the use of services tends to underestimate the effect of poverty because the middle classes are better at accessing health services'. Experience with health services and public education affect consumers' awareness of signs and symptoms of emerging health problems, familiarity with health services, level of comfort in seeking help, rights to treatment and means to access it. These factors influence the help-seeking behaviour of individuals, and, as Sherman, Gillespie and Diaz (1996) point out, variation in help-seeking behaviour of consumers affect variations in the use of services across geographical regions, regardless of need
- local policies involving more or less aggressive approaches to identifying cases. For example, Sherman, Gillespie and Diaz (1996) discuss the effect on prevalence data of a local public health authority's approach to identifying hepatitis B cases.

These issues may be particularly problematic for programs where there is significant unmet need and inappropriate distribution of services.

Again, use of services in one program may be influenced by relative access to services in another program. For example, relative availability of ambulatory or primary care services has been shown to influence the use of hospitals. Judge and Mays (1994a) argue that one problem with using measures such as past use of hospital beds is the availability of other services within the region. As an example, they refer to the widely varying availability of family health services at a local level in the UK, and argue the demand for hospital services will vary inversely according to the numbers of general practitioners per 10,000 patients in each region.

Despite these findings, there is a degree of relationship between need and service use, as Kessler et al. (1999) demonstrate. They examined data from the National Comorbidity Survey and found that, for clients already in treatment, those with more serious and complex problems were more likely to use services and receive specialty treatment. Furthermore, in many situations, only the use of services can be observed empirically, whereas 'need' can be inferred only indirectly. Much of the empirical modelling of need used observations on the use of services, but attempts to control for the relative availability/supply of services (Carr-Hill et al. 1994b), and other factors were not considered appropriate for inclusion as a legitimate need factor (Van de Ven and Ellis 2000, Rice and Smith 2001).

Comparing expected with observed service use

A relatively direct means of assessing need is based on measuring a social indicator variable for different groups across an entire population (e.g., at the national level) — the *observed* extent of the problem for different groups. To estimate the relative need of a specific geographical region, rates for each sub-group are applied to the number of individuals in each sub-group for the region.

This was the approach Jarman et al. (1992) used to determine the expected rates of psychiatric admissions for different district health authorities in England. They obtained the national statistics for psychiatric admissions cross-tabulated by age, sex, and marital status. They then obtained the age, sex, and marital status measures for each district health authority, and applied the national rates for these variables to estimate the expected number of psychiatric admissions for each district. Inferences can then be made on the basis of comparisons between observed and expected psychiatric admission rates within each district health authority. Variations between observed and expected service use may indicate such problems as non-use of existing services, or under-resourcing.

Under/over-spending of resources compared to need

To reduce the occurrence of over- or under-spending of allocated resources, Bindman et al. (2000) recommended first making 'explicit to each health authority the implications of the allocation formula for the resourcing of particular clinical areas.' Where discrepancies between allocation and expenditure of funds were detected, 'local health authorities should be called upon to justify them, particularly where ... [this is] a systematic effect.' They envisaged two outcomes from this approach: (a) a shift in expenditure by the local authority; or (b) re-examination of the allocation formula.

Historical funding

In some instances, ongoing funding is based on the past use of resources – those who spend most tend to be allocated a greater percentage of the available resources. This logic fails to take into account the possibility that higher use of resources may be the result of a range of factors unrelated to actual need for services. In reviewing the process of allocating resources in the UK health system, Judge and Mays (1994a) commented that 'observed differences [in the availability and use of resources] are not obviously related to relative need' and argued that 'the resources available for community care ... should be related more closely to population needs than to the past distribution of provision.'

Carr-Hill et al. (1994b) compared allocation of funds to expenditure across 100 health authorities in England, and found that areas most in need of mental health intervention (as measured by the York Psychiatric Need Index) 'tended to spend less than their allocation on mental health services'. This relationship increased in strength when the four inner-London authorities were excluded.

Bindman et al. (2000) suggest a range of hypotheses to explain these findings, including that some health authorities may spend more in relation to allocation because they are 'purchasing services which have less well-developed community care, spending a high proportion of their resources on in-patient beds or having low levels of CPN [community psychiatric nurse] activity.' Again, health authorities that spend more may be 'attempting to serve a greater proportion of their local population' or may have a higher number of mentally disordered offenders. Bindman et al. (2002) further report that under-spending of allocated funds on mental health interventions increases with the level of socio-economic deprivation in areas outside London; commenting 'that expenditure is inequitable, and that the effect of this inequity is to cause further disadvantage to areas with high levels of socio-economic deprivation.'

Variation in the cost of providing services to different regions

In addition to variation in need, the cost of providing the same service may vary in different geographical regions (Sheldon 1997). Many resource allocation formulas try to build in allowances for these cost differences.

Costs may differ across geographic regions for two main reasons – costs associated with urbanisation, and costs associated with delivering services in rural and remote regions.

Higher costs associated with urbanisation may be associated with the need to pay higher wages to attract staff (for example, the UK NHS includes a 'market forces' factor to recognise the impact of attracting staff in the London region; US Medicare adjusts payments to hospitals to reflect the effect local market conditions have on prices and labour costs); and higher costs for land and property.

In Australia, and across the world, more attention has been paid to the higher costs of delivering services in rural and remote localities. Asthana et al. (2003) summarise the major types of issues driving up costs in rural regions:

- diseconomies of scale owing to the small size of facilities and relatively small populations served over large areas (lower occupancy rates, low average volume, and sporadic demand)
- higher travel costs owing to distance (including cost of supplies from higher transportation costs)
- unproductive time owing to the higher proportion of travel
- difficulty in staffing and recruitment, leading to higher staff costs
- lack of community services to back up services
- substitution of services (for example, emergency departments operating as an alternative to office-based and other services owing to the lack of alternatives in the community).

Earlier studies also pointed out that, because there is limited access to care in remote and isolated locations, the sole provider of health care services in an area must offer all essential services despite low volume or sporadic demand. Consequently, these communities have relatively more facilities and services per capita than other communities of their size, increased operating costs from diseconomies of scale, increased transportation costs, and longer lengths of stay (Pink 1994; Dalton, Holmes and Slifkin 2003; Joint Policy and Planning Committee 1994; Hale 1996).

Hindle, Frances and Pearse (1998) reviewed the relevant literature at that time on costing hospital services in rural and remote Australia. They expected that factors leading to greater costs in more isolated communities would include 'input costs for consumables, staff and patient transport, staff recruitment ... [and] difficulties in recruiting and retaining staff.' Although it was logical to assume costs would be higher for more remote hospitals, they found the evidence was still unclear. However, examination of their use of statistics (discussed later) may shed a different light on this finding.

In a U.S.-based study, Dalton, Holmes and Slifkin (2003) found that those facilities with 500 or fewer discharges per year faced 60 per cent more variability in volumes than the average for all hospitals. This instability in volumes constrained administrators' ability to efficiently set budgets and recruitment goals,

as variable occupancy prevents optimal use of flexible staffing levels and access to casual relief could be more restricted.

Scotland, the U.S., British Columbia, Alberta and Ontario are examples of jurisdictions that provide an adjustment for remoteness or isolation using population density or road distance as a proxy measure. In Scotland, the Formula Spending Share approach found higher unit costs in remote facilities in comparison to their more urban counterparts (Scottish Executive Health Department 1999; Asthana et al. 2003). Scotland compensates rural facilities for the increased costs of providing services to dispersed rural populations through an empirically determined adjustment based on a broad indicator of remoteness (road kilometres per 1,000 population).

In the U.S., Medicare has implemented three facility-based programs and one home health care program to improve access to health services in rural settings. The 'Low Volume' adjustment is based upon a remoteness proxy and is most crucial for isolated hospitals. The adjustment is based on a multi-year average volume for facility. Medicare found that higher unit costs were most pronounced for facilities with less than 200 discharges per year and that the relationship becomes relatively flat after about 500 discharges (85 per cent of these organisations are in rural counties). The simulated model produces a multiplier to the base payment rate for a case. Only hospitals with fewer than 500 discharges qualify for the adjustment. Medicare also provides a 10 per cent add-on for rural home health agencies to compensate for potentially higher visit costs in rural areas related to low patient volume and long distances between patients (MedPAC 2001).

Other factors that may affect the relative cost of providing services to regions may include:

- the need to employ specific and more costly strategies to meet the unique needs of sub-groups in the community (e.g., ethnic or cultural groups, youth), including specialist training, and the training and employment of liaison officers
- additional costs involved in treating severe, chronic, and difficult-to-treat cases
- the costs of providing incentives for staff to work in isolated regions
- likely greater demand on public services because of the rate of poverty in a region.

Allocating resources to specific services within regions

As Hindle (2002a) has argued, while the allocation of funds to regions should be based on relative need, the allocation of funds within regions should be output-based – that is, providers within the region are funded on the basis of what they achieve or are expected to achieve (for example, a specific number of consumers treated within a given year).

Questions that need to be addressed when considering funding on the basis of output include:

- do consumers with different issues/problems require interventions that vary in cost?
- are different approaches/interventions more cost-effective and more suited to the specific needs of individual consumers or groups of consumers than others?
- are some types of services more suited to meeting the specific needs of significant groups of consumers than others?

One approach that addresses this issue is casemix, which involves identifying the range of problems consumers present with and classifying those problems according to the cost involved in providing appropriate treatment. In the general health setting, the outcome of this process is the Diagnosis Related Groups (DRG), which forms the basis of casemix funding.[2]

Diagnosis Related Groups

Uehara, Smukler and Newman (1994) describe the casemix/DRG approach as it is used in the U.S.:

> Under payment systems based on this method, hospital patients are assigned to 1 of 470 diagnostic categories on the basis of diagnosis at time of admission to care. The case mix or diagnostic categories reflect patient attributes that have been found to strongly affect the total cost of an acute care episode (in addition to primary diagnosis, these include age, presence of surgical procedure, and presence of additional disease or problems). Reimbursement for patient care is calculated by multiplying a per case payment rate by the DRG weight for the diagnosis, the latter representing the average cost of similar cases. The relative well-defined nature of acute hospital care allows calculation of total costs associated with an episode of care.

Uehara, Smukler and Newman criticise the use of this approach for the treatment of consumers with mental health problems and those in nursing homes. Similar reasons would apply to consumers of ATOD-related services. They include:

- consumers who are admitted for longer periods than is typical in acute care hospitals may 'vary widely in the intensity and level of care, and thus consumption of resources'
- lengths of stay for mental health consumers and nursing home residents are highly variable, making 'the calculation of total costs per episode of care infeasible'
- research supports the view that diagnosis at admission is a poor predictor of use of resources for consumers of mental health services.

Resource Utilisation Groups

One method that has been adopted to address these concerns is the Resource Utilisation Groups (RUGs) approach, used to calculate expected costs associated with longer-term care. RUG classification is based on assessments of: 'level of functioning, rehabilitation needs, and behaviour training needs rather than primary diagnosis' (Uehara, Smukler and Newman1994). Varying costs are associated with different RUG classifications.

[2] For detailed discussion of this approach see Hindle (2001), Hindle and Lenz (2001).

Level of Need Care Assessment

Uehara, Smukler and Newman (1994) propose a form of RUG approach to be used with consumers of mental health services – the Level of Need Care Assessment (LONCA) method. This method takes into account such factors as:

- specific areas of consumer need based on assessment of physical, social, and psychological functioning. Consumers were rated according to their level of need (from 'absent' through to 'minimal', 'moderate' and 'intense').
- matching consumer needs to interventions, including inpatient *vs.* outpatient status and provider type. Matching involved identifying the minimal service standards for addressing specific consumer needs. The level of expected use of resources was then classified as either 'high', 'moderate', low' or 'no resource' needs.

Thus, for each of three areas of functioning, there were four levels of associated needs for resources. Expected costs of treatment were then attached to each of the 64 categories defined by level of need within each area of functioning.

Uehara, Smukler and Newman (1994) describe the LONGA method as 'still too primitive for long-term resource planning', but say it 'constitutes a more appropriate starting place for defining casemix than alternative schemes.'

Methods of funding providers within geographical regions

There are several methods of funding providers. One of the primary issues in such funding is that of cost-containment; that is, if providers are funded on the basis of services provided, then there are no incentives for them to limit costs. This is one of the major criticisms of *fee for service* funding.

In an attempt to contain costs and facilitate a more equitable distribution of resources, a range of approaches has been adopted which fund providers on the basis of set costs and reimbursements for treatments, or set budgets based on estimated service use.

One of the means of countering the effects of a free market system on demand is the *prospective reimbursement* system introduced in the U.S.. Under this system, providers are reimbursed on the basis of 'expected type and amount of services required for treating patients with particular diseases' (Regier et al. 1984). *Casemix* represents another form of prospective reimbursement.

Another method is to provide *block grants* to providers based on estimates of need or service use. This approach is discussed by Logan, Rochefort and Cook (1985) in relation to the allocation of funds to alcohol, drug abuse and mental health programs. In this instance, funding was determined primarily on the basis of state need-based formulas.

Callaway and Hall (2000) compared the fee for service and managed care financial systems, and concluded that the managed care system/capitation provided a more equitable distribution system in terms of access, service delivery, and outcomes. Grazier and Eselius (1999) describe and discuss 'carve-out' models of managed care that include linking insurance benefits to disease, service category, or population.

Commons, McGuire and Riordan (1997) discussed the use of performance contracting in the allocation of funds to substance abuse programs in Maine, U.S.

Existing formulas for allocating resources to regions

Several methods have been proposed for allocating resources to various regions within a State. This section describes several of these methods, including a critique of their more technical aspects.

Weighted capitation

Carr-Hill et al. (2002) point out that 'the size of a population has by far the greatest influence on its need for health care size', and therefore any formula for determining resource allocation to geographic regions 'will have only a marginal (though important) effect on financial allocations. Apart from population size, the other two drivers are age structure and the needs factors used.' Weighted capitation therefore initially allocates according to the population size of different regions, and then adjusts these allocations according to other factors thought to affect the need for, and the costs of supplying services across these regions.

Judge and Mays (1994a) detail that use of weighted capitation to allocate funds to regional health authorities in the UK in 1994, and outline the following steps:

Step 1: 'regional populations are adjusted for national variations in the use of hospital beds by different age groups (the so called age-cost weights).'

Step 2: 'population shares are adjusted to take account of differences in health needs not already accounted for by population size and age structure by means of a measure of standardised mortality which is associated with variations in hospital use. Currently, this is the square root of the all cause standardised mortality ratio for the population under 75 years of age.'

Step 3: 'Each region is then subject to a final set of adjustments. These mainly reflect the higher labour costs of providing health care in the Thames regions...'

The method of weighted capitation is more applicable to allocating resources for general health services than to ATOD-specific services, because the formula for weighted capitation makes the following assumptions:

a. individuals in need of treatment will use available services, and this does not vary across sex by age-groups
b. the level of need, and therefore service usage, within sex by age groups is the same across geographical regions
c. individuals who become unwell or die will use the specific services to which funds are allocated
d. individuals with life threatening or terminal illness will use resources more than others.

This logic applies more validly to the general health setting than to specific ATOD interventions. Thus, while population size probably remains the single best predictor of need for both general health services and specific ATOD interventions, the processes for determining variations based on other indicators of need probably should vary.

Generic Need Index for acute health services

The NSW Health Department has adopted and developed the model of resource allocation devised in the UK (see Hindle, 2002a, for further discussion). While the Department is currently developing a formula to allocate resources for specific interventions targeted at improving mental health, as yet there

are no comparable formulas for allocating resources to specific interventions to reduce substance abuse in Australia.

The general model used by the Department involves allocating resources to its Area Health Services (AHSs) based on an assessment of relative need for each AHS. Originally, the Department adopted the approach used in the UK of estimating need on the basis of age, sex, and mortality rates. However, this model was developed to include 'all factors that affect per capita needs for acute health care that cannot be explained by an Area's age and sex composition.'

The AHSs are then largely responsible for the allocation of resources within their own jurisdictions, and use a casemix approach to ensure uniformity of service and cost containment. Funds are held back for interventions that are centrally funded, and to address the issue of migration from one AHS to another (that is, cross-boundary flows between Areas).

Hindle (2002a) says the NSW Generic Need Index was developed using 'regression analysis of NSW inpatient statistics. The dependent variable was hospital use measured by the standardised DRG-weighted separation ratio, and the independent variables were mortality, rural-urban differences, and socio-economic status. The data were analyzed over 154 local government areas (LGAs).'

Hindle quotes the formula for the Generic Need Index:

Generic Need Index = 97351 + 0.4 (SMR<70) - 0.4 (EDOCC) - 0.9 RUR, where

SMR<70 is the indirect standardised mortality ratio for age less than 70

EDOCC is the socio-economic index developed by the Australian Bureau of Statistics (ABS) which measures the level of 'education achieved and occupational status'

RUR is the rurality (health-related rural status) index calculated by Eckstein and Gibberd (1994) specifically for the RDF.

Several issues arise in the use of the Generic Need Index to estimate relative need. First, the dependent measure in the regression analysis used to derive the index was 'hospital utilisation measured by the standardised DRG-weighted separation ratio.' That is, the factor constructed out of the independent measures (socio-economic, mortality, and rural-urban differences) was constructed to maximise its capacity to predict hospital use; and while service use may relate to need in an area, significant factors moderate the relationship between service usage and need, making it a poor sole indicator of real need. Thus, although the Generic Need Index is based on other factors associated with need, its purpose is to predict service use, not need.

Another potential problem with the Generic Need Index is that it pools together variables that may be classified as indicators of need with variables related to the cost of providing services. For example, the rurality index was constructed to represent distance from the nearest referral or base hospital, population density, and land use (e.g., farming, non-farming, or mixed community). This index was the strongest predictor of service use, which is not surprising since the presence of services stimulates use (Carr-Hill et al. 2002). It may be argued that rurality is related to need; but in theory a range of other factors is probably more strongly and directly linked to need (e.g., poverty, availability of other services, etc). Rurality may be a better indicator of the variability in cost of providing services, as Hindle, Frances and Pearse point out (1998).

Social Dysfunction Scale (SDS)

Simeone, Frank and Aryan (1993) discuss the Social Dysfunction Scale (SDS) developed by the New York State Division of Substance Abuse Services as a basis for resource allocation. The SDS is based on seven indicators of need identified by previous research. For each county within the state, total numbers of individuals in the following groups were obtained: the number of school dropouts, the number of AIDS, tuberculosis and syphilis cases, the number of drug-related arrests, the number of regular drug users, and the number of unemployed individuals.

For each of the seven variables, the number of individuals identified within a county was divided by the total number of individuals in the county considered to be at risk. Thus, for example, the number of school dropouts in a county was divided by the number of students in the county, and the number of individuals with syphilis, tuberculosis, or AIDS, the number of drug-related arrests, and the number of regular drug users in a county were each divided by the number of individuals aged 15 to 35 living in the county. Finally, the number of unemployed in a county was divided by the number of individuals in the labour force within the county. These derived proportions were then added, yielding an SDS score for each county that theoretically ranged from 0 to 7. This process was also carried out at regional and State levels.

At this point, the calculations for a county could be represented as follows:

Proportion school drop outs = Number of school dropouts/Number enrolled in school

Proportion of AIDS cases = Number of cases of AIDS/Number aged 15 to 35

Proportion of tuberculosis cases = Number of cases of tuberculosis/Number aged 15 to 35

Proportion of syphilis cases = Number of cases of syphilis/Number aged 15 to 35

Proportion of drug-related arrests = Number of drug-related arrests/Number aged 15 to 35

Proportion of regular drug users = Number of regular drug users/Number aged 15 to 35

Proportion of unemployed = Number of unemployed individuals/Number in civilian labor force.

SDS = Proportion of school dropouts + Proportion of AIDS cases + Proportion of tuberculosis cases + Proportion of syphilis cases + Proportion of drug-related arrests + Proportion of unemployed.[3]

[3] These calculations could be expressed in the following notation:

Proportion of cases = Number of cases identified/number of individuals in the reference group, or $m_{ij} = v_{ij}/P_{ij}$

Where

m_{ij} *= the proportion of cases for variable i in county j,*
v_{ij} *= the number of cases identified for variable i in county j, and*
P_{ij} *= the number in the reference group for variable i in county j.*

The formula for the SDS for each county would be written as:

$$SDS_i = \sum_{i=1}^{k} m_{ij}$$

where k = the number of variables (Simeone, Frank and Aryan 1993).

The theoretical minimums and maximums for each proportion were therefore '0' and '1' respectively, resulting in an SDS with a theoretical minimum and maximum of '0' and '7' respectively. Each SDS score for counties and regions was then divided by the SDS score for the State to obtain a SDS score proportion. The formula for calculating the SDS score proportion is:

SDS score proportion = SDS score for a county/SDS score for the State.

The SDS score proportion represented the relative contribution that each county or region contributed to the total level of social dysfunction in the State, and should be used as the basis for funding.

One of the major problems with this approach is that the categories used were not mutually exclusive – that is, a school dropout may also have had a drug-related arrest; an individual with AIDS may also have had syphilis, a regular drug user may also have had tuberculosis, and so on. There is therefore a high probability of double counting, resulting in total SDS scores (obtained by adding ratios) that exaggerate the true nature of the problem. Further, it can reasonably be assumed that the rate of double counting varies across different areas, resulting in a further distortion of the SDS.

Another serious problem with the logic behind the construction of this measure is adding together different proportions to obtain SDS scores. This might not present a problem if the numerators for the proportions (e.g., the number of students, the number of individuals aged 15 to 35, and the number of individuals in the labour force) represented mutually exclusive groups that contributed equally to the overall size of the population of interest. However, as this is not the case, adding the proportions cannot be said to represent an estimate of the proportion of the population at risk.[4]

Another major problem with the SDS is that it is crudely based on proportions of those at risk for a given population. This being the case, it bears no relationship to the actual size of the population. Thus, for example, two areas may obtain the same SDS because they have approximately the same proportions of population at risk, but one of the areas may have a population double the other's, meaning that it has twice the number of individuals at risk. On the basis of resource allocation decisions detailed by Simeone, Frank and Aryan (1993), both areas would receive the same share of resources based solely on their SDS, despite the discrepancy in actual number of individuals at risk.

Overall, the SDS is a poor tool for estimating prevalence rates. Further, without a weighting for size of the population (and thereby the actual size of the population at risk), it is also an inappropriate tool for determining the allocation of resources.

[4] One way the extent of this problem could have been reduced would have been to add all the raw numbers for each of the variables (i.e., number of school drop-outs, number of regular drug users, etc.), and then divide the total number of individuals at risk by the size of the population of interest within each county, region, and for the State as a whole. This would not, however, have eliminated the problem of double counting.

Relative Needs Assessment Scale

Mammo and French (1996) proposed an alternative to the SDS which they termed the Relative Needs Assessment Scale (RNAS). The authors argued that the SDS allocated greater weight to areas with larger populations – that is, it 'tends to exaggerate the extent of need in those areas while de-emphasising the need in geographic areas that are sparsely populated.' Given that the SDS is not weighted by population, this problem could have arisen only from differences in detection rates and variation in double counting.

Mammo and French's scale is calculated in a similar way to the SDS in that it is based on the ratio of observed cases for a particular variable within a particular county to the reference group for that variable within the same county. Mammo and French's addition at this point is to weight each proportion with a proportion based on the number of observed cases for a particular variable within a particular county to the total number of observed cases for that variable across all counties. The formula for the calculation of this weight is as follows:

$$\theta_{ij} = P_{ij}/M_i$$

Where
P_{ij} *= the number of observed cases for variable i in county j, and*
M_i *= the number of observed cases for variable i totalled across all counties.*

Numbers thus derived, are added across all variables within a particular county and then divided by the number of variables. All scores for counties were then totalled across counties. A particular county's RNAS is then calculated by dividing its score by the total score across areas.

Mammo and French argue that one of the problems with the SDS is that it 'suggests uniform distribution of resources in situations where the number of people observed for indicator *i* is the same in all counties.' According to Mammo and French, the RNAS, on the other hand, takes into account 'the fact that the burden of the substance abuse problem, or problem load, is different for small and large population size counties.' The authors argue further that the RNAS 'takes into account both the absolute number of people observed for each included indicator and the populations at risk in the counties. In particular, by assigning the inverse of the populations at risk as weights, the RNAS ... appropriately assigns more weight to smaller counties ... This is desirable because smaller counties will shoulder a relatively larger burden of the problem for the same number of people observed in each.'

Based on similar procedures to those employed to calculate the SDS, the RNAS falls under the same criticism. Mammo and French's scale did, however, include ratios that reflected comparative need across areas – that is, the ratio of observed cases in an area to the total number of cases across all areas.

Mammo and French's reported purpose in developing the RNAS was to ensure fairer allocation of resources to smaller areas. Their means of achieving this, however, was not strongly supported by previous research, statistical argument, or face validity. Stronger support for their argument of allocating resources according to relative need would have been to eliminate the ratios calculated within areas and simply use the ratios calculated across areas. Further, the authors argue that they desired to allocate in favour of smaller areas because of perceived greater costs of providing services in these areas. A more closely linked statistical procedure to follow through on this argument would have been simply to weight area ratios (representing comparative need) by a measure of population size.

Comment on the SDS and RNAS

As stated above, if the aim of comparing rates across geographical regions is to allocate according to the relative extent of problems, then a more appropriate means of making relevant estimates would be to use the weighting developed by Mammo and French. For example, within the Australian context, a way to compare the relative burden of drug-related arrest carried by each LGA might be to divide the number of drug-related arrests for each LGA by the total number of drug-related arrests for the State.[5] All other factors being equal, fair allocation of resources on this basis could occur only if detection rates were the same across all LGAs. Further, as with the SDS and RNAS, significant problems would arise if rates were added across different variables.

Other measures based on correlational data

Sherman, Gillespie and Diaz (1996) used factor analysis to reduce data on 68 social indicators related to substance abuse in 76 communities. They conducted a principal components analysis of the data, and obtained 11 factors with eigenvalues greater than 1, labelled primary environmental deficit scale; AODD-related crime scale; high-risk youth scale; HIV/AIDS high-risk scale; high school deficit scale; AODD-related morbidity scale; secondary environmental deficit scale; tavern license rate scale; cocaine admission rate scale; DUI arrest rate scale; and tertiary environmental deficit scale.

However, the first factor accounted for 50% of the variance, and the next extracted component accounted for 9% of the variance. Other methods would probably have indicated that either only the first factor should be considered, or at most the first three factors. In all likelihood, the first factor (the primary environmental deficit scale) may well have been a suitable indicator of general need. Almost all socio-economic and public health variables loaded highly on this initial factor, confirming observations of a strong link between poverty and ill health.

Sherman, Gillespie and Diaz then made multiple regression analyses with each of four service use variables in turn (short-term residential admission rates for AODD treatment, long-term residential admission rates for AODD treatment, intensive outpatient admission rates for AODD treatment, and outpatient admission rates for AODD treatment) as the dependent variable. Factor scores were derived from the multiple regression equations, resulting in four factor scores for each community. They used the discrepancy between predicted admission rates and actual admission rates to identify *underserved* areas. The assumption underlying this type of analysis is that areas that are similar in terms of the predictors should also have similar admission rates. Areas with lower than predicted admission rates are considered *underserved*. The logic is as follows.

[5] The associated formula might then appear as:

$w_{ij} = P_{ij}/M_i$

Where
w_{ij} *= the proportion of drug-related arrests (i.e., cases for variable i) for the State observed in LGA j*
P_{ij} *= the number of drug related-arrests (i.e., observed cases for variable i) in LGA j and*
M_i *=the number of drug-related arrests (i.e., observed cases for variable i) totalled across the State.*

First, it is necessary to identify through factor analysis a factor or factors representing need for specific ATOD services. Secondly, it is assumed that, if there is a perfect relationship between need and service use, when you predict service use from need, the predicted service use will be the same as actual service use. This is tested through multiple regression analysis with the measures of need predicting actual service use. Thirdly, the differences between predicted and actual service use (the discrepancies) are scrutinised to identify areas where service use is higher or lower than predicted or expected. They assumed that if service use was lower than expected, the area was being underserved – that is, there was significant unidentified or unmet need. Finally, cluster analysis permitted identification of communities that had similar characteristics, allowing policy decisions to be made according to groups of communities rather than individual communities.

Explanations other than under-servicing may be relevant to discrepancies between predicted and actual service use. For example, some sub-groups in the general community may have lower rates of ATOD problems, and if so, examining the discrepancies to find any systematic variation according to this characteristic would be a test of the hypothesis.

Relevant statistical considerations

In light of questions raised by some existing allocation formulas, we include here a technical excursus for readers with a specific interest in measurement. It deals with relevant statistical issues such as aggregate data and the 'ecological fallacy'; prevalence and severity; summing prevalence rates for sub-groups; the use of multiple indicators of need; the use of correlational data; the comparison of expected with observed use; and under- and over-spending of resources compared to need.

Aggregate data and the issue of ecological fallacy

Instead of investigating the behaviour of individuals, researchers often study groups and make inferences about individual behaviour based on these findings. When such an inference is incorrect, it is referred to as an ecological fallacy.[6]

Information collected for a region may be summarised in a number of ways: means, mediums, modes, sub-totals, rates, and proportions. The first three measures, referred to as *measures of central tendency,* provide a general picture of the entire community. The remaining measures provide information on selected sub-groups within the community. Thus, for example, indices of poverty may include *average income* for the region (a measure of central tendency) as well as the *proportion of the regional population that receives social security benefits.*

One of the problems inherent in the use of measures of central tendency (particularly means and mediums) is that they do not provide us with information about the range or

[6] A range of researchers including Brenner et al. (1992), Openshaw (1984), Schwartz (1994), and Tranmer and Steel (1998) offer detailed discussion of this topic.

groupings of the variables of interest. For example, two regions that have the same mean income may have very different ranges: individuals in one community may all enjoy a relatively moderate income, whereas the other community may include individuals who are extremely poor as well as individuals who are extremely rich. The assumption that both communities are alike, based on measures of central tendency, would be inaccurate and would represent the problem of ecological fallacy.

If substance abuse is more likely to occur in particular sub-groups within communities, measures of central tendency will fail to adequately identify these sub-groups. A more appropriate approach is to estimate the numbers of individuals within selected sub-groups (e.g., those considered to be at risk or experiencing ATOD-related harm such as those living in poverty or those committing drug-related offences), and then derive a measure that depicts the extent to which this sub-group is representative of the population (e.g., proportions such as number at risk divided by the population of interest).

A further issue is that when a relationship is found between two variables based on aggregate data (e.g., proportion of area populations receiving social security benefits and proportion of alcohol-related arrests for area populations) it must be considered that other factors are influencing the observed relationship. One possibly hypothesis for such a relationship might be that areas that have a higher proportion of the population receiving social security benefits may also have a higher proportion of police officers and therefore detection rates may be higher. One method of reducing the likelihood of an ecological fallacy occurring is by linking studies involving aggregate level data. The application of this approach to the above example would be to review studies comparing the alcohol-related arrest rates of individuals who receive or do not receive social security benefits.

Prevalence and severity

One means of estimating need is to examine prevalence rates for the indicator of interest (e.g., use of a particular drug). A development of this approach is to use prevalence rates for different target groups, a method discussed by Shern and Goosser (1992) for assessing the need for services treating alcohol and drug abuse and mental illness.

Regier et al. (1984) point out that the classic method of assessing unmet need is to estimate the 'true prevalence of disorders in the general population followed by an assessment of the prevalence of similar conditions under treatment in health service settings.' These authors go on to argue for the inclusion of measures of severity, for example, the distinction between 'absolute need (acute life-threatening illness) and relative need (less severe and chronic illness).'

Adding prevalence rates for selected sub-groups

One of the issues involved in the procedure of adding prevalence rates is the use of mutually exclusive populations of interest. For example, it would be appropriate to calculate the rate of substance abuse for females and males separately, and to use these as indicators of need within a regional population, or to obtain an overall rate by adding the number of females and males at risk and then dividing this figure by the total population (e.g., all males and females). It is also appropriate to use this approach with age groups (that is, looking at the prevalence rates within different age groups). As discussed above, the UK and NSW health systems use sex by age group prevalence rates and multiply these by the relevant sub-populations within regions to obtain estimated numbers of individuals at risk within regions.

There are, however, a number of researchers who add rates that are not drawn from mutually exclusive populations, for example, Simeone, Frank and Aryan (1993) who developed the Social Dysfunction Scale, and Mammo and French (1996) who developed the Relative Needs Assessment Scale, both discussed above.

As pointed out previously, these researchers did not study mutually exclusive reference groups (e.g. no doubt many individuals in the labour force were also aged between 15 and 35). Adding these groups together results in a number exceeding the regional population. This problem also occurred with the identification of cases (e.g., school drop-outs may also have been unemployed).

The other problem is that the extent of overlap of sub-groups of interest may be different for different regions, with the result that in regions with greater overlap of sub-groups also have greater double counting in denominators (the number of individuals in the population of interest), and quite likely also in numerators (number of individuals considered to be at risk). A further problem in these analyses occurred with adding rates based on identified cases and their reference groups — without taking the overlap into account, and without taking into account the actual size of the reference group (e.g. the number of enrolled students).

The combined effect of these procedures was to produce figures that could be considered only poor indicators of the relative rate of substance-related problems across defined regions.

The use of multiple indicators of need

Arguably, an indicator is a variable that can be considered to reflect the measure of interest. Various indicators of need for specific substance abuse interventions have been used, including driving under the influence, drug law arrests, ATOD-related mortality and morbidity, and admissions to specific ATOD services. No indicator is a perfect measure of risk/need. For example, service use is affected by several influences other than actual need. Further, there are ATOD-related crimes that go undetected. Because of this accepted error in measurement, attempts at measuring the extent of problems within a region typically use multiple indicators. The example provided above of Simeone, Frank and Aryan's (1993) procedure of totalling different rates represents one such attempt.

Complicating the picture is the fact that some indicators of risk do not relate directly to the behaviour of individuals, but instead describe the characteristics of the area of interest (e.g., the number of liquor outlets in the region). More recent research has focused on the use of social indicators as indicators of risk. Social indicators provide information on the characteristics of groups (e.g., proportions, numbers, rates etc.), are typically extracted from existing data collections, and exclude personal measures (e.g., satisfaction, mood, etc.) or other variables that are linked to individuals. Unlike indicators of specific use or harm (e.g., ATOD-related arrests indicating substance abuse), many social indicators may not appear on the surface to relate directly to the phenomenon of interest. Social indicators may relate more to factors that are seen as underlying causes, or non-ATOD specific social consequences of substance abuse, or simply factors that are observed to vary with the level of substance abuse across communities.

The underlying assumption in using multiple indicators of risk/need is that while each indicator may be an inexact measure of risk/need (that is, it contains error variance – other influences other than substance abuse affect the observed level of the variable), the factor that is associated with all of the indicators (the common variance) is level of risk/need. The most appropriate statistical method for identifying the underlying factor common to all indicators is *factor analysis*.

Issues concerning the use of correlational data

Research on risk/needs assessment that affects the allocation of resources relies in large part on the use of correlational data – particularly research that tries to investigate relative need across geographical areas. The most commonly used analyses based on correlational data are factor analysis (also referred to as internal factor analysis) and multiple regression analysis (also referred to as external factor analysis). To illustrate some of the pitfalls that commonly occur with the use of these methods of analysis, we shall refer to specific studies of risk/needs assessment and resource allocation.

In 2000, Dietze et al. conducted a study of relative need for alcohol services in Victoria. They conducted an internal factor analysis of data collected for each local government area (LGA) in Victoria. Variables included in the analysis were:

- adjusted per capita consumption
- alcohol outlet density (per 10,000 population)
- rate of high-alcohol-hours accidents (LGA of victim)
- rate of high-alcohol-hours accidents (LGA of accident)
- rate of external-cause alcohol-related hospital admissions
- rate of other alcohol-related hospital admissions
- per cent income below $25,000 p.a.
- per cent males in unskilled occupations
- per cent unqualified males
- population density.

The data were subjected to orthogonal factor analysis, and revealed three factors corresponding to the clusters of variables i.e., indicators of alcohol consumption, indicators of socio-economic standing, and indicators of alcohol-related accidents and hospital admissions. Dietze et al. (2000) found that, when factor scores based on the three extracted factors were plotted across LGAs, different patterns emerged for the three factors. On this basis, they concluded there was no relationship between alcohol consumption, alcohol-related harm, and socio-economic status.

The logic of factor analysis is that, to measure a variable that may be difficult to measure directly (the *factor*), several variables that are related to the factor (the *indicators*) can be measured. What these indicators share is their relationship to the factor – that is, the measure of the factor is the shared variance of the group of indicators. To obtain a valid and reliable measure of the factor, it is necessary that the indicators be only moderately related. For example, if the aim of a factor analysis is to obtain a measure of need (as in the study by Dietze et al. 2000), it would be inappropriate to include two highly correlated measures of consumption: a measure of harm (e.g., alcohol related accidents), and a measure of socio-economic disadvantage (e.g., number of unemployed). With this set of variables in an analysis whose aim is to extract one factor, the factor would be biased towards the two highly correlated measures (the two measures of consumption). Such an analysis should include a range of different indicators that are only moderately related, but all theoretically related to the factor of interest.

A second issue is that where more than one factor is extracted, the factors are extracted (using principal components analysis) in such a way that they are orthogonal to each other (that is, they are not related/correlated to each other). This process ensures that, with each extraction of a factor, the remaining variance in the indicators is unique – not related to the factors already extracted. The aim is not to explain how different indicators group together.

Once factors are extracted, they are rotated in such a way that they align best with groupings of indicators. Typically factors are rotated orthogonally (in such a way as to maintain their absence of relationship). However, if theory suggests that the factors represented by the set of indicators are in fact related to each other, then the rotation of factors should be such that it allows the extracted factors to be related. In the study conducted by Dietze et al. (2000) factors were rotated orthogonally which did not allow for the possibility that the factors could be related, even though theory suggested that they were. Because the aim of an orthogonal rotation of factors is to maintain the absence of relationship between the extracted factors, it follows that plotting of such factors across areas must result in unrelated patterns. Dietze's findings were more than likely a result of the statistical method used (a statistical artefact) than a true indicator of relationships.

Another issue is that factor analysis and multiple regression analysis are based on the correlations between variables, and one of the underlying assumptions in measuring correlation is that the variables concerned are normally distributed – that is, most cases fall around the mid-range/mean of the variable, and the number of cases drops off at about the same rate the further you measure toward each of the two extremes of the variable. If cases tend to be clustered toward one or the other extreme of a variable, the data are said to be *skewed*, and any correlation measured between this and another variable will not provide a true indication of the relationship between the two variables.

A related issue pertains to the spread of the variables included in analyses. If, for example, the aim of a study was to examine the relationship between height and another variable, the result of selecting only short individuals for inclusion in the study would be to produce an inaccurate measure of the relationship between the two variables. If a study aimed to investigate the relationship between a measure closely related to height and another measure, again there would be good cause to treat any measure of relationship with caution because, by limiting the range in height, the range of the closely related variable may have been reduced as well.

An example of limiting the spread of variables and the consequences of doing so is found in a study by Hindle, Frances and Pearse (1998). They conducted several regression analyses, including casemix funding, three measures of isolation, an isolation composite factor, number of beds, and number of FTE staff, to predict actual costs of 105 hospitals with small bed numbers. Only two hospitals had 60 or more beds, while 85 per cent of the hospitals had less than 40 beds. That is, the variable 'number of beds' was highly skewed.

When entered in regression equations with the casemix data, indicators of distance were found to have small negative coefficients. Hindle et al. discussed this negative relationship in terms of possible confounding factors such as 'variations in severity and consequent costs within DRGs which are associated in the other direction.' However, several statistical issues may have affected their findings.

First, in order to test the hypothesis that extent of isolation was related to costs, Hindle et al. controlled for the possible effect of hospital size by selecting only smaller hospitals. If there is a relationship between hospital size and remoteness, then in controlling for hospital size, Hindle et al. also decreased the variability in remoteness, thereby dampening or eliminating any relationship between costs and remoteness (as measured by distance from other hospitals).

Secondly, the data on *number of beds* was highly skewed, thereby making it impossible to gain an accurate measure of the relationship between this variable and other factors in correlational analyses without transformation of the data. The distribution of other variables was not reported, but given the inclusion of one highly skewed variable in the regression analyses, the distribution of other variables remains in doubt. Thus, the findings cannot make a definitive contribution to the issues of costs of providing services to more isolated communities.

Finally, an issue that is particularly relevant to the area of need assessment relates to the issue of employing service use as an indicator of need.

As discussed above, there are several reasons for why service use is a poor indicator of need. However, in seeking a set of indicators or predictors of need, researchers have conducted multiple regression/external factor analyses using a measure of service use as the criterion variable (the variable to be predicted in lieu of actual need). External factor analysis involves identifying a set of indicators and constructing a factor from them that correlates with another variable (the criterion variables), so that instead of looking at the relationship between two variables, the analysis looks at the relationship between a variable and a factor constructed from several indicators.

In this instance, the primary basis for constructing a factor is not to account for as much of the common relationship/variance between the indicators as possible. Instead, it is to construct a factor that has the highest possible relationship with the criterion variable. If a valid and reliable measure of need were used as the criterion variable, then it would be appropriate to argue that a factor constructed through external factor analysis would provide us with an appropriate measure of need. However, if the criterion variable employed is service use, then there is not a strong argument that a factor constructed in such an analysis would provide a good measure of need.

Despite this, the NSW Health Department uses, as its measure of need, a formula based on the prediction of hospital use, and although the formula has good face validity in that it uses a standardised mortality ratio, a measure of socio-economic status, and a measure of rurality as predictors, the constructed factor (the *Generic Need Index*) is designed to predict service use, and not service need. A more appropriate measure of need would be derived using an internal factor analysis involving moderately related variables that may all be considered indicators of need.

Technical issues in allocating resources for ATOD-specific treatments to regions

In summary, several technical issues need to be considered in allocating resources for ATOD-specific treatments across and within the regions of Australia.

If it can be assumed that all consumers experience the same level of risk and will respond equally to each intervention considered, then allocation of resources to geographical regions is a simple process of allocation according to the proportion of the population within each region. If, however, it is accepted that different sub-groups experience different levels of risk, then resource allocation according to need can become more complicated.

Any formula for determining the allocation of resources needs to take into account the size of the population, the relative level of need across different regions, and the relative cost of providing services to different regions.

Some approaches allocate resources according to population size and then make adjustments, typically according to need, and then according to the cost of providing services. Other approaches focus initially on the assessment of need.

Approaches that focus initially on population size try to take account of some of the factors that produce variations in need or use of services — for example, differences between males and females in different age groups. To produce figures that can claim to reflect actual population rates, it is essential to use rates for mutually exclusive sub-groups weighted by the numbers of individuals in these sub-groups.

A further issue in the use of population size in resource allocation formulas is whether or not to define the population of interest. Given that individuals in particular age groups (e.g., the very young and the elderly) are unlikely to experience the sorts of problems addressed by specific ATOD interventions, it seems reasonable to exclude individuals in the age ranges 0–5 and 75+.

The approach of focusing initially on population size weighted according to sex and age group and then weighting by other indicators of need does not allow for the possibility that variables such as sex and age may also be related to these other indicators of need. An approach that considers all indicators of need together (e.g., one involving factor analysis) would take possible relationships between all indicators into account.

Accordingly, to take population size into account while considering all indicators of need together, it is necessary to derive such a measure of need, and weight regional populations according to this measure. This approach assumes that regions that have the same population sizes and the same level of risk should have the same level of resources, while the allocation of resources to regions that have the same population sizes but different levels of risk should be proportional to the level of risk.

The final step in the equation is to consider possible differences in the cost of providing services to different regions.

One of the problems with using factor scores rather than rates is that the units of the derived factor scores do not relate directly to numbers of individuals. A further issue is the relative importance that should be placed on the index of need — the larger the variation in scores on the index of need, the greater will be its impact on the final figure representing a region's allocated proportion of resources. Variance can be increased or reduced by transforming the needs index scores in different ways. For example, taking the square root of the needs index scores (the transformation

used on mortality rates in the UK resource allocation formula) reduces variance and thus its influence on resource allocation.

Because of the shift from estimating rates of those at risk in factor analysis, other means of justifying the allocation of resources (apart from reference to estimated rates of those at risk) must be found. One way to achieve this is an iterative process involving comparisons of predicted resource allocation to actual resource allocation, as suggested by Bindman et al. (2000). The method also takes into account Hindle's (2002a) argument that changes in the allocation of resources should move gradually from existing levels to levels indicated by the new approach to funding.

Thus, predicted resource allocation would be determined initially by a direct weighting of population size by the needs index. The resulting variable (e.g., predicted *level of risk*) would be used to predict current level of resourcing. Discrepancies between predicted resourcing and actual resourcing would then be examined to provide information on possible transformations of the need index scores in order to obtain a better fit. When the best fit is found between predicted and actual level of resourcing for regions, residuals are calculated and used in a further analysis. The residuals represent areas that have higher or lower than expected resourcing.

The next analysis involves a measure of variation in the cost of providing services used to predict the residuals. The aim of the analysis is to determine the extent to which variations in the cost of providing services explain deviations from expected levels of resourcing. The residuals from this second analysis are then used to identify areas that can be argued to be either over- or under-resourced. Shifts from current levels of resourcing then involve relative increases in funding to under-resourced areas and relative decreases in funding to over-resourced areas.

Resource allocation to alcohol and drug services

So far we have examined what commentators have said about resource allocation in the general health care environment, and about regional allocation to specific services and populations — including alcohol and drug services in some instances. We now turn to the relatively smaller body of commentary and research that addresses resource allocation in ATOD services in particular, and how the needs for resources may be determined in this arena.

Indicators of need for ATOD-specific services

Indicators of need for ATOD-specific interventions may be measures of factors that influence use, measures of consumption, measures of factors that are affected by consumption (for example, arrests, hospitalisation, morbidity and mortality), or factors that co-vary with consumption or associated problems. Factors that influence use may be further classified into risk and resilience factors (Kim et al. 1998b).

The choice of appropriate indicators is based on research, but in this field we must be aware of problems of generalisation. As a single example, Amey and Albrecht (1998) studied socio-economic and demographic variables as a way to explain racial and ethnic differences in drug use, and concluded that their findings suggested that correlates of substance use in white communities might not be the same as correlates of substance use in minority groups.

A further consideration is the type of information used. Generally, in studies comparing regions, summary data for those regions are used. The summary data used in determining the level of need for ATOD-specific services across regions typically include demographic characteristics of communities as well as social and economic correlates of substance abuse (social indicators).

For example, Judge and Mays (1994a) discuss the use of social indicators in the UK health system, where variables were chosen on the basis of their statistical relationship with past numbers of clients. They point out that 'standard spending assessments are based on calculations of the potential number of clients in each of the three service groups [services to children, the elderly, and people with a disability] and use a mixture of weighted demographic, morbidity, and social indicators for each local authority.' They recommend a cohort study to investigate 'how the morbidity and socioeconomic circumstances of individuals affects their needs for and use of health and social care.'

Several studies have proposed indicators of specific ATOD-related needs:

- Anglin, Caulkins and Hser (1993) suggested that variables useful in determining allocation of resources included the number of users, the extent of the consequences, the level of consumption, and the level of expenditure.
- Mammo and French (1998) used a range of social indicators relevant to the use of alcohol and other drugs, including domestic violence, drug and alcohol-related arrests, drug and alcohol-related mortality, and the number of alcohol retail outlets.
- Gorman and Labouvie (2000) used 36 indicators in principal component and regression analyses to investigate the level of need for drug prevention resources across regions.

Poverty and substance abuse

There is a well-established link between poverty and substance abuse.[7] Delva et al. (2000) studied the relationship between poverty (that is, in receipt of welfare benefits) and reported illicit drug use (use of hallucinogens, marijuana, heroin, stimulants, cocaine, inhalants, sedatives, analgesics or tranquilisers in the past year). Their findings indicated that, even controlling for the effects of sex, age, race, education, and community characteristics (such as drug availability, police presence, social disadvantage shared across the neighbourhood), illicit drug use was 50% more common among welfare recipients than among non-recipients. When the authors compared those living in extreme poverty (that is, in receipt of food stamps) with non-welfare recipients, the difference in illicit drug use increased.

Montoya and Atkinson (2002) report several studies that provide estimates of between 10% and 50% of welfare recipients engaging in substance abuse. Simeone, Frank and Aryan (1993) cite studies demonstrating that 'the highest rates of drug use are found among this population [the unemployed].'

Socio-economic standing, poverty

In discussing the issue of equity in provision of health care, Almond (2002) says that 'increasingly, poverty and inequalities have become accepted as determinants in poor health.' Beale, Taylor and Straker-Cook (2002) cite a range of studies that support the argument that 'poor socio-economic circumstances are associated with reduced life span.' An earlier study by Jones and Duncan (1995) investigated the geography of chronic illness using multilevel modelling, and concluded:

[7] For example, see Nakashian 2002; O'Toole et al. 2003; Draine et al. 2002; Kodjo and Klein 2002; Finlayson et al. 2002; Poulton et al. 2002.

In general, and irrespective of individual characteristics, places with a low income or a high deprivation suffer the worst health on a range of measures.

The *artifact* explanation, often referred to as the myth explanation, maintains that the observed relationship between socioeconomic status (SES) and health results from biases in measuring SES and health.

The *social selection* or drift explanation suggests that people suffer from ill health first and, due to resultant disability, and reduced employment, drift down in social position or become poor.

According to the behavioural explanation, poor people are unhealthy because they engage in health-inhibiting behaviours, such as smoking, substance abuse, and inadequate nutritional practices.

The *structural* explanation emphasized that poor health results from decreased access to the material conditions and resources that facilitate health. Increasingly, this latter explanation emphasizes both material and psychosocial factors. Those with less purchasing power are more likely to be exposed to the ill effects of inadequate housing, inadequate nutrition, unsafe neighbourhoods, occupational hazards, and the stresses produced by uncertainty, powerlessness, and lack of control. Lack of income also precludes people making the kinds of behavioural choices that support health.

Reutter, Harrison and Neufeld (2002) argued that the last of these explanations is most consistent with current research.

Glover (1999) discussed the method of resource allocation in England for 1990–2000. In examining differences in level of resource allocated across different regions, Glover identified two discriminating dimensions. The first was level of affluence, and the second related to the number of residents with chronic problems. Glover concluded that this method resulted in a fair allocation of resources.

Read and Gehrs (1997) discussed measures that were adopted by an inner city mental health service to establish a framework to provide more cost-effective services to the consumer population. They noted that large inner city communities dealt with a range of social problems including substance abuse, higher rates of homelessness, poverty, and serious mental illness.

Geography

As we have seen, marked variation in costs arise in delivering generic health services in rural and remote regions, and this certainly affects the delivery of alcohol and drug services in the more remote areas of Australia. A greater demand for specific ATOD treatment services is likely in these areas, given the poor supply of other available health care providers. Additional regional costs are also entailed in addressing problems associated with the use of specific substances.[8]

[8] For further discussion see McDermott (1995); Field and Wakerman (2002); Humphreys et al. (2002); Mooney, Jan and Wiseman (2002).

Measures of socio-economic standing

Census data

Sherman, Gillespie and Diaz (1996) included a range of measures of socio-economic standing, drawn from data from the 1990 U.S. Census, in their study of indicators of need:

- area median household income
- average number of residents per square mile
- per capita income of area residents
- per cent of area households receiving public aid
- per cent of area residents living below poverty
- per cent of area families living below poverty
- per cent of area female-headed families living below poverty
- per cent of area households female heads with own children
- per cent of area residents >16 years unemployed
- per cent of area children (<=17) living in poverty
- per cent of female residents >16 unemployed
- per cent of male residents >16 unemployed
- per cent of area households reported as vacant
- per cent of households with more than one person per room
- per cent of households occupied by single persons
- per cent of households/single person/ 65 years and older.

Additional UK measures used by Carr-Hill et al. (2002) included:

- proportion of persons in permanent owner occupied buildings
- proportion in private rented accommodation
- proportion of households without two cars
- proportion of men aged 26–64 without a paid job in past 10 years
- proportion of persons in households with a head in manual employment class
- proportion of eligible families not on family credit.

In developing composite need indexes for alcohol treatment, drug treatment and combined substance abuse treatment services, McAuliffe et al. (2002, 2003; McAuliffe and Dunn, 2004) used ATOD-related mortality as one component of their need indices, including:

- percentage of the population that belongs to specified minority groups (Hispanics, African Americans, American Indians)
- percentage of population in prison
- incidence rates for IDU-AIDS, TB, Hepatitis B and syphilis.

Income level

As mentioned above, Carr-Hill et al. (2002) investigated the use of information on social security benefits extracted from hospital ward data, in predicting use of services in Northern Ireland. The social security data included recipients of income support and family credit. These measures gave more immediate and accurate information on level of income than census data. Lloyd (2002) pointed out, however, that because of the high correlation between these two measures, research should use either one or the other measure, or derive a composite of the two.

Council tax valuation band

Beale, Taylor and Straker-Cook (2002) examined the relationship between mortality and Council Tax Valuation Band (CTVB) within a health authority in the UK. The CTVB is calculated on the basis of an external evaluation of homes. Homes are 'allotted an "open market" value (as at 1 April 1991) based on size, layout, character and locality, and placed into one of eight "valuation bands" A–H.' Socio-economic standing, from lowest to highest, corresponds to valuation bands from A to H.

Beale, Taylor and Straker-Cook (2002) reported that 'the results consistently show that the A, B residents are at significantly greater risk of dying than their counterparts residing in bands C and above, and that socio-economic influence, as marked by CTVB, is highest in women and in those who die before median life expectancy.'

One foreseeable problem with using the corresponding index across statistical regions in Australia stems from the fact that housing in cities is typically more expensive than housing in rural and remote regions. Resource allocation based on such a formula would therefore result in bias against rural and remote regions.

Other measures

Jarman et al. (1992) found that the most powerful predictors of variation between observed and expected psychiatric admission across district health authorities were rates of notification of drug users, standardised mortality ratios, and levels of illegitimacy. An alternative, but less powerful predictor, was an underprivileged area score.

Participation in education

Sherman, Gillespie and Diaz (1996) pointed out that previous research (e.g., Kandel and Faust 1975) 'concluded that AODD [Alcohol and Other Drug Dependence] affects both educational participation and performance.' Several measures of school achievement (e.g., attendance rates, performance, highest level of education achieved) loaded highly on an 'environmental deficit' factor, along with measures of socio-economic deprivation and AODD-related morbidity, and mortality. Measures of educational participation used in Sherman's study were obtained from the 1991–1992 Chicago Public Schools year data, including:

- percentage of population three years and older enrolled in school
- average attendance rate for area public elementary schools
- percentage of population 25 and older with no more than 8th grade education
- average 6th grade reading score
- average attendance rate for area public high schools
- average public high school senior composite American College Testing Program (ACT) score
- average public high school junior reading score
- average graduation rate for area public high schools.

Types and levels of substance availability and consumption

Sherman, Gillespie and Diaz (1996) cited previous research that linked availability of alcohol with per capita consumption and extent of alcohol-related problems. However, when they conducted regression analyses to predict service use, they found only a very weak relationship (ß = -0.17) between their Tavern License Rate Scale and rate of outpatient admissions. Their measures of availability included estimated area population rate of packaged goods licenses and tavern licenses. Additional variables used by Dietze et al. (2000) included the number of liquor outlets per 10,000 population, and total litres of alcohol sold (type of beverage sold weighted by alcohol content).

ATOD-related legal consequences

The rates of detection of use and supply of illegal substances and illegal use of alcohol are affected by level of consumption and associated with other consequences of consumption (e.g., see Sherman, Gillespie and Diaz 1996). Detection rates are also associated with police resources and practice, and government policy.

Wessman and Edie (1976) who compared law enforcement recognition with service use (participation in a methadone program) in a U.S. city, and found that over half of the identified addicts were unknown to police. These findings have implications for the use of different types of measures (e.g., arrest and incarceration rates) as indicators of drug use.

Sherman, Gillespie and Diaz (1996) identified 10 criminal arrest categories identified by the U.S. Drug Use Forecasting (DUF) program and added three other categories: driving under the influence (DUI), liquor law violations, and narcotics possession and/or distribution. Information on the 13 variables was obtained from the Chicago Police Department. Sherman, Gillespie and Diaz (1996) extracted an AODD-Related Crime Scale from their data, which they found to have moderate relationships (ß = 0.38 and ß = 0.28, respectively) with intensive outpatient AODD-related admission rates and outpatient AODD-related admission rates.

Measures of legal consequences

Sherman et al.'s measures of legal consequences of substance abuse included:

- estimated area population rate of motor vehicle theft arrests
- estimated area population rate of drug law arrests
- estimated area population rate of homicide arrests
- estimated area population rate of criminal sexual assault arrests
- estimated area population rate of assault arrests
- estimated area population rate of total AODD index arrests
- estimated area population rate of robbery arrests
- estimated area population rate of prostitution arrests
- estimated area population rate of other sex offences
- estimated area population rate of disorderly conduct arrests
- estimated area population rate of burglary arrests
- estimated area population rate of theft arrests
- estimated area population rate of liquor law violation arrests
- estimated area population rate of driving under the influence arrests.

In a series of articles, McAuliffe et al.(2002, 2003; McAuliffe and Dunn 2004) discuss the development of composite need indexes for alcohol treatment, drug treatment and combined substance abuse treatment services. One set of indicators was based on alcohol and drug related arrest rates (McAuliffe and Dunn 2004). The researchers adopted an 'explicit mention' criteria for identifying arrests related to alcohol or drugs; that is, there had to be an explicit connection to drug and alcohol issues in the original data, for example a drink driving offence. They acknowledged the potential shortcomings of arrest data including 'variations due to local crackdowns, biased coding and enforcement and missing agency data' but undertook several steps to minimise the impact of these limitations; for example, calculating rates over a three-year period rather than for a one-year period (McAuliffe and Dunn 2004).

ATOD-related mortality

Mortality rates

Sheldon, in an editorial for the *British Medical Journal* (1997), gave an overview of the development of formulas for determining the allocation of health resources. He argued that, despite increasing sophistication in these formulas, 'a similar result could be produced by basing a formula simply on population size and age, weighted by the under 75 year standardized mortality ratio. This would be simpler and more transparent than combining the results of 10 different but highly correlated instruments.' He commented:

> The standardized mortality ratio ... summarises the cumulative social and health experience of people living in an area and is a sensitive indicator of general health care need and a powerful predictor of community health care use. Its advantage over other variables which are derived from the census is that it is available routinely on a regular basis and is not manipulable.

Mortality rates and substance abuse

All other factors being equal, substance abuse will increase the likelihood of dying. Thus it would seem reasonable to use alcohol and other drug-related mortality as an indicator of need. The problem with this measure, however, is that the extent to which substance use contributes to specific causes of death is not constant, and there is often a significant time lag between use of a substance and death (e.g. between consumption of alcohol and death from cirrhosis of the liver, and between smoking and lung cancer). Accordingly, substance-related deaths tend to inform us more about the past consumption patterns of individuals (sometimes from many years previously). In the time between consumption and death, these individuals may have reduced or ceased consumption, or relocated from other areas. There is also the problem that, while an individual may engage in substance abuse, his or her death may not be attributed to the abuse of that substance, either because the possible contribution of the substance abuse was overlooked or because the death was, in fact, unrelated to the substance abuse (for further discussion see DeWit and Rush, 1996).

Given the fact that the mortality related to substance abuse may bear little relationship to present consumption, and that consumption may not be associated with the death of an individual who abuses substances, mortality is a relatively poor indicator of current substance use, of immediate substance-abuse related harm, and of the need for intervention.

Measures of ATOD-related mortality

Sherman, Gillespie and Diaz (1996) included the following measures of ATOD-related mortality:

- area infant mortality rate
- area female population age-adjusted mortality rate
- area male population age-adjusted mortality rate
- area general population age-adjusted mortality rate
- per cent of area deaths due to chronic liver disease
- per cent of area deaths due to accidents
- per cent of area deaths due to homicide
- per cent of area deaths attributed to tobacco use
- per cent of area deaths due to alcohol main-cause
- per cent of area deaths due to other drug main-cause.

In developing composite need indexes for alcohol treatment, drug treatment and combined substance abuse treatment services, McAuliffe et al. (2002, 2003; McAuliffe and Dunn 2004) used ATOD-related mortality was used as one component of their need indices. The researchers included deaths only where there was an explicit mention of alcohol or drugs in the coded mortality data — for example 'death due to opiate overdose' (McAuliffe and Dunn 2004; see McAuliffe et al. 2003: 207 for ICD codes).

ATOD-related morbidity

The health consequence of alcohol, tobacco, and other drug use is well documented. McAuliffe and Dunn (2004) used the result of the U.S. National Household Survey of Drug Abuse (NHSDA), to estimate state level prevalence of drug, alcohol and substance abuse disorder. The sample size of this survey had to be increased from around 25,500 to 71,764 to enable State-level estimates to be derived. A range of survey questions could be used to estimate prevalence of these disorders, and also treatment gaps defined as the difference between the per cent with a need and the per cent treated.

Sherman, Gillespie and Diaz (1996) propose adding the following measures of ATOD-related morbidity:

- area low birth weight rate
- area teen birth rate
- area population rate of reported tuberculosis TB cases
- area population rate of reported infectious syphilis cases
- area population rate of reported hepatitis B cases
- area population rate of AIDS cases/ mention of drug use
- area population rate of AIDS cases through June 1993
- area population rate of AIDS cases for 1991–1992
- area female population rate of reported AIDS cases
- area male population rate of reported AIDS cases.

ATOD-specific service use

Sherman, Gillespie and Diaz (1996) included the following measures of ATOD-specific service use:

- proportion of total area admissions for cocaine use
- proportion of total area admissions for alcohol use
- proportion of total area admissions for opiate use
- proportion of total area admissions for hallucinogen use
- proportion of total area admissions for marijuana use.

McAuliffe and Dunn (2004) discussed the potential and limitations of different types of data sources for developing indicators of need for alcohol and drug treatment services. They commented:

> Alcohol epidemiologists have held that surveys effectively identify alcohol abusers and problem drinkers while indicators such as alcohol mortality are more sensitive to the severe alcohol dependence reported by treatment clients and untreated homeless and prisoners missed by surveys (e.g., Dunham 1983; Furst 1983; Westermeyer 1990; Carroll and Rounsaville 1992; Weisner 1993). Indicator and survey measures also differ regarding the drugs to which they are sensitive. Drug mortality statistics are sensitive to the existence of otherwise hidden hard-core opiate and cocaine abusers, but they miss marijuana abuse almost completely. By contrast, the NHSDA appears to be more sensitive to marijuana use than opiate use. There are also indications that surveys and different indicators vary in their sensitivity to the substance abuse problems of age and racial groups (Johnson and Bowman 2003; Kip, Peters and Morrison-Rodriguez 2002). For example, adolescent drug and alcohol problems are more likely to be detected by surveys and arrest statistics than by mortality rates. Surveys are most likely to miss the hard-core substance users who are most likely to die or be arrested (Cottler et al. 1987; Bray, Wheeless and Kroutil 1996).

McAuliffe and Dunn conclude that 'using multiple measures in composites and profiles rather than depending on a single type of data appears to be more likely to reveal a complete picture of state substance abuse treatment needs.' (2004).

Developing local systems of effective treatment

Resource allocation formulas and models account for distributing AOD funds to regions. The next level of consideration moves from knowing *how much* to spend in each region to knowing *what elements* to spend it on to provide an effective treatment system. Apart from some work recently commissioned by the NSW Department of Health's Centre for Drug and Alcohol, the only other attempt to provide guidance at the local level is by the UK NHS. In 2002, the National Treatment Agency for Substance Misuse (NTA) published *Models of Care*, which provides a national framework for developing local systems of effective drug treatment in England. This framework aims to achieve equity, parity and consistency in the commissioning and provision of substance misuse treatment and care.

Models of Care

The overriding concept behind *Models of Care* is that local NHS Commissioners should seek to develop an integrated drug treatment system in their area and not just a series of separate services. The framework advocates a systems approach to meeting the multiple needs of drug users and aims to have explicit links to other generic health, social care and criminal justice services.

Development of Models of Care

The development of *Models of Care* was initially commissioned from the UK Department of Health, and a team of drug and alcohol specialists undertook work. The team drafted a first round document outlining the key principles of the framework then consulted a large number of stakeholders in writing and through regional events. A final document was then prepared and a three-month formal consultation was conducted by the NTA. The final document was developed from the consultation process, key national documents, standards and guidelines and national and international research evidence into effective treatment modalities. The *Models of Care* project was also assisted by its early learning from regional *Models of Care/enhancing treatment outcomes* pilot sites. All guidance provided by the project is in line with the recommendations of the UK document *Drug misuse and dependence: guidelines on clinical management* (Department of Health 1999) and is also consistent with the NHS Plan (2000) to modernise health and social care services (NTA, 2002).

Commissioning a four-tiered framework

Under the framework services for drug users have been grouped into four broad tiers. Commissioners should ensure that drug users in all local areas have access to the full range of tiers 1 to 4 services:

Tier 1: Non-substance misuse specific services requiring interface with drug and alcohol treatment

Although Tier 1 services work with drug and alcohol users, this is not their sole purpose. This tier consists of services offered by a range of professionals such primary care services, social workers, teachers, community pharmacists and probationary officers. The role of Tier 1 services includes the provision of their own services plus screening, assessment and referral to local drug and alcohol treatment services in Tiers 2 and 3.

Tier 2: Open access drug and alcohol treatment services

Tier 2 services provide accessible drug and alcohol specialist services for a wide range of users referred from a variety of sources including self-referral. The aim of treatment in Tier 2 is to engage users in treatment and reduce drug-related harm. Services include needle exchanges, advice and information and *ad hoc* support services not delivered in the context of a care plan.

Tier 3: Structured community-based drug treatment services

These services are provided solely to users in structured programs of care and include interventions such as cognitive behaviour therapy, structured counselling, methadone maintenance, community detoxification and day care provided either as an abstinence program or as an adjunct to methadone maintenance. Tier 3 services require the user to receive a drug assessment and to have an agreed upon care plan between the client and service provider. These Tier 3 services are usually provided within the user's local area but occasionally are provided by a neighbouring area or a regionally located facility.

Tier 4: Residential services for drug and alcohol users

This tier is further subdivided into Tier 4a: 'Residential drug and alcohol misuse specific services' and Tier 4b: 'Highly specialist non-substance misuse specific services'. Tier 4a services include inpatient detoxification and residential rehabilitation units and as such usually require a higher level of commitment from users. Examples of Tier 4b services include specialist liver units and forensic services for mentally ill offenders. Tier 4 services are most likely provided at a multi-area, regional or national level.

Drug treatment modalities

In addition to having access to a full range of Tiers 1 to 4 services, the framework stipulates that users should also have access to a full range of evidence-based treatment modalities within these tiers:

- open access services
- advice and information services
- needle exchange facilities
- care planned counselling
- structured day programs
- community prescribing
- inpatient drug use treatment
- residential rehabilitation

Care planning element

An integrated care pathway (IMP) describes the nature and anticipated course of treatment for a client and a predetermined plan of treatment (NTA, 2002). Services should be agreed between and with local service providers and built into service specifications and service level agreements.

Drug treatment commissioners should also ensure that improved systems of care planning and coordination are implemented in local areas. The overarching principle of care planning and coordination is that those who enter into structured treatment services receive a written care plan, which the client agrees to and is subject to regular review with a care coordinator (NTA, 2002). Within the framework, users may receive treatment from a range of professionals and from more than one service at same time or consecutively.

Limitations of the framework

The primary focus of *Models of Care* is adult drug treatment, and while it is relevant to developing alcohol services, it does not provide specific guidance on commissioning alcohol treatment generally. Nevertheless, it is important to recognise the applicability of the framework elements to alcohol treatment services. Taking into account that many services are drug and alcohol combined, and many quality standards cover both alcohol and drugs, it is not feasible to develop a different conceptual commissioning framework for alcohol treatment (NTA 2002).

Models of Care does not incorporate a detailed consideration of the misuse of prescribed drugs, volatile substances or steroid misuse, nor does the framework explicitly consider nicotine dependence.

The framework specifically focuses on commissioning drug treatment for adults and not for adolescents aged 17 and under. *The substance of young needs review 2001* by the UK's Health Advisory Service extensively covers provision of drug and alcohol treatment for young people. Commissioning of services for youths follows a similar four-tiered approach, with specific links to generic services for children and families, and interface services for those in transition from adolescence to adulthood (Health Advisory Service, 2001). Finally, *Models of Care* does not cover drug treatment within prisons.

The Victorian Framework for Service Delivery

Victoria has developed a *Framework for Service Delivery* of alcohol and drug treatment services to describe how specialist drug treatment services will be purchased, and the key components of the range of services.

In 1996, the Victorian Government announced a number of initiatives in the development of alcohol and drug services under the title *Turning the Tide*. Treatment services under this initiative would focus on:

- providing specialist services for young people
- strengthening community-based treatment services
- providing training to health professionals
- developing a community education and information strategy.

The aim was to ensure one coherent service system and a consistent standard of service delivery of specialist drug and alcohol services to those in the State who need them most. Integration of service delivery would ensure continuity of care, and with coordination at two levels:

- service system perspective – the appropriate deployment of a region's drug and alcohol budget
- client perspective – the need for case management, so that each person can access the services they need when they need them, and with one clinician accountable for ensuring (but not necessarily providing) their proper treatment and support.

Under the *Framework*, allocation of funds to service providers in each region is based on the region's internal planning processes, which will determine the best number, type, location and mixture of services required to meet the needs of the region. Regions have a greater capacity to purchase services that encourage integration and responsiveness among local services.

On the delivery of services, the system focuses on two client groups in each region – young people (up to 21 years), and adults in general. Specific service elements for young people include:

- outreach
- counselling, consultancy and continuing care
- supported accommodation
- peer support
- Aboriginal services.

Service elements for the general population who have problems with alcohol and other drug use should be available or accessible from each region, and include:

- residential withdrawal
- rural withdrawal support
- home-based withdrawal
- outpatient withdrawal
- substitute pharmacotherapy: specialist methadone services
- counselling, consultancy and continuing care
- residential rehabilitation
- supported accommodation
- peer support
- Aboriginal services.

These alcohol and drug services must be accessible to all people in the State. Regional service systems must be designed to ensure that all people living within the region have access to appropriate alcohol and drug services. These specialised services must also collaborate with other services, such as GPs, mental health, housing and social support, to provide responsive service options.

Options for developing a resource allocation formula for ATOD services in Australia

A process for devising a possible ATOD-Specific Needs Index (ASNI) for Australia, taking into account the previous experience described in this review, may be found in Appendix 1.

It sets out the options of factor analysis followed by multiple regression analysis or factor analysis alone, and suggests possible indicators and related questions, weighting of population sizes, and the differential costs of providing services across the regions of Australia.

3. The national workshop on resource allocation in AOD

A workshop on resource allocation and mapping treatment capacity was held in Sydney on 25 and 26 August 2004. The purpose was twofold. Day one considered the implications of studies and commentary on resource allocation in health for future work in alcohol and other drugs. Day two considered the results of efforts to map treatment capacity at the national level, and implications for future data collection.

Participants in the workshop included representatives of the ANCD, the Australian Government Department of Health and Ageing, officers of State and Territory jurisdictions, and the AIHW (see Appendix 2).

Day one: The implications of the literature on resource allocation

The consultants outlined central elements of the resource allocation literature review (based on the materials in Chapter 2), including a description of the UK *Models of Care* framework. An invited panel of expert speakers then presented their thoughts on resource allocation in general and specialist health areas, built on their long experience in health economics, health policy analysis, and parallel issues in resource allocation to mental health services.

Expert speakers

Professor Helen Lapsley, Visiting Fellow at the School of Public Health and Community Medicine, University of NSW

From an economic perspective, the problem with resource allocation policies in the ATOD sector is the many overlapping and conflicting policy objectives. Economists want resources to be equitable, but in most cases full equality leads to inefficiencies. If current funding is insufficient to deliver adequate services to the total populations, a more equitable distribution could result in even fewer people getting adequate services.

In terms of policy instruments, we ought to be pragmatic about what is already available, because they can be employed quickly. We should use the instruments proven or likely to be effective instead of waiting for the ideal or perfect model.

Political acceptance of policy must also be considered. For example, the unitary UK Government introduces policy relatively effortlessly, whereas in Australia one must consider the different levels of government. New Zealand has some superb drug strategies, but they also have one government and a much smaller population, with the results things can be changed almost immediately.

In considering models of care and the process of implementing policy, it is important to examine both financial and organisational resources. Relative priority order is also important – it is not possible to do everything at once, and how we order priorities needs to be established (for example, ordering by amount of harm or burden of disease).

In policy evaluation, elements are often changed before they have been fully evaluated. It is important to be clear about what we want to achieve and how to measure it. Even when people are doing good there is still the opportunity to do better if efficiency and focus can be improved. There is a need for rigorous, ongoing evaluation, but the evaluation should not be more complex than the available data allow. Where programs are lengthy, interim evaluations can include efficiency work on the processes involved. In making economic evaluations, we do not consider the outcomes we want to achieve from treatment are enough. This vagueness of intended outcomes is something that would not be accepted in the rest of the health sector.

Associate Professor Jim Pearse, Director, Health Policy Analysis, Centre for Health Service Development, University of Wollongong

Resource allocation approaches may be considered at number of levels:

- decisions about policy parameters
- decisions about how to distribute available resources across geographical areas
- decisions about resources allocated to specific services, such as using output-based funding.

NSW is one Australian State that has taken a resource allocation approach for a fairly long time. In the years since the late 1980s, disparity in the State has been substantially reduced, but still exists to some extent.

Issues that can arise in resource allocation include:

- services outside your funding may have an influence on the situation – for example, general practitioners
- the use of Australian Government and State funding can be a big challenge, especially in bringing them together
- deciding which regional boundaries to choose for allocation purposes
- the effects of patients who live in particular area but cross boundaries to access treatment.

There are qualitative differences between dealing with issues at a macro level and at a defined level such as AOD, and between treatment and prevention. Transparency and simplicity in models is very important in resource allocation, and we should aim to apply these principles.

Mr Gavin Stewart, Manager, Evaluation Program, Centre for Mental Health, NSW Health

Using models in resource allocation is particularly important. Discovering errors in a model first can make a lot of savings: owing to the relatively slow planning in health, there is often opportunity to fix models that are wrong.

Mental Health in NSW has introduced the *Mental Health – Clinical Care and Prevention (MH-CCP) Model (version 1.11)* for use in planning and evaluation. An overview of the model is as follows:

- estimate the percentage of clients who need each level and type of care by age and illness severity
- convert these to numbers for a specific population (for example, NSW 1996)
- quantify care plans as hours of clinical contact, plus or minus days of inpatient care
- quantify resources – for example, contact hours to full-time equivalent, bed days to number of staffed beds
- model priorities as a percentage of each clinical need group that can be treated
- calculate resources (beds, etc) and outputs (separations, bed days, etc.)
- apply standards, benchmarks, or local costs to resources and/or outputs
- perform a gap analysis against current and future data – for example, some or all of the population, staff, beds, funding, activity, costs, care plans and percentage treated.

The MH-CCP Model is built up from a series of smaller models of different age groups within the population, and also has a severity spectrum. The model shows that high intensity users consume a lot of the resources.

Group discussions

These presentations were followed by group discussions on issues in resource allocation at State, Territory and Australian Government levels, and the roles and responsibilities of the various jurisdictions. The discussions included the implications of the literature; developing resource allocation methods in the drug and alcohol area; and on who needs to do what to progress resource allocation methods and issues.

Session 1

Prompting questions for the first session of group discussion were:

- are we taking a population health based model or an individual care based model?
- should the AOD sector invest in or consider resource allocation or models of care in order to improve on what is already being done?
- what are the roles and responsibilities of the various jurisdictions in resource allocation?

Participants made a sharp distinction between the mapping project and constructing a resource allocation model. The mapping exercise gives a current description of services, whereas resource allocation is more about how things should be at the national level.

The fundamental problem with resource allocation at the national level was that each of the jurisdictions had different approaches to allocation. For example, in some jurisdictions, it was done at a statewide level, while others left allocation decisions to smaller areas within the State.

In general, it would not be of value to invest in developing a resource allocation model at the national level, as there was not enough comparable data or scope at the State and Territory level. But there might be some worth in developing a resource allocation model for those resources that came directly from the Australian Government, to add value to what the individual States were already doing.

Session 2

Prompting questions for the second session of group discussion were:

- is it of valuable or useful to try and develop an Australian version of *Models of Care* (UK)?
- what should be the scope of that model? Treatment only or prevention and treatment?
- if the development of this model should go ahead, what principles should guide how and what it is used for?

It could be of some use to develop a model of care for Australia, since having some reference point or model was better than having no model at all. The task of simply collecting and distilling the current body of evidence and knowledge that could define a drug treatment service model would be a useful project. Each State and Territory seemed to have their own suite of AOD interventions and each used different terms and definitions for them. There could be some value in simply collating these lists of suites from the jurisdictions.

The scope of any potential model should be broad, yet it should still acknowledge the particular role of specialist services, and should focus on those who are working on specific AOD issues. Any model should be useful as a reference point but still allow for local interpretation.

Day two: Efforts to map treatment capacity at the national level

On Day two of the workshop, Professor Ian Siggins described the history, timeframes and processes of the mapping exercise, and suggested some implications for data collection in the future.

Mr Hayden McDonald (Mipela GIS) demonstrated an example of an interactive map of the data collected for one State, and described the capacity of the mapping software.

These presentations were followed by a general discussion on the future of the mapping exercise, State and Territory commitment to the project, and ways to keep the mapping data current. The issues raised in this discussion are addressed in the conclusions and recommendations that follow.

4. Conclusions and recommendations

Comments on the results of the mapping project

In the course of compiling and verifying the list of treatment services, we made a number of practical observations with obvious implications for the clarity, consistency, and timing of future data gathering about AOD capacity in Australia.

The rapid rate of change in the field

First, it is clear from the collection and verification process that the personnel, range of services, and even the existence or location of AOD services change constantly. The list of treatment services produced by this project differs markedly from the lists in the 2001/2002 sources: services that were operating then no longer exist, or operate now in a different manner; during calls to agencies to verify the data, a substantial number told us their grant had expired or was about to expire, or said they planned to add certain services if funds were available; many had altered the services they offered, because of changes in staff capacity, or local demand, or new networks and alliances among agencies, or changes in policy and direction; and new services have come into operation.

There is a need to devise a reliable process for keeping the list of agencies and services up to date.

Defining treatment services

The categories of services chosen for the mapping project were the agreed categories used by the AODTS-NMDS. In the course of verification, we used these categories to ask agencies what services they now offered. Very often, we had to explain what activities the NMDS definitions referred to, and on request supplied these definitions in writing. AIHW supplied this set of code descriptions:

Withdrawal management (detoxification) – refers to any form of withdrawal management, including medicated and non-medicated, in any delivery setting.

Counselling – refers to any method of individual or group counselling directed towards identified problems with alcohol and/or other drug use or dependency. This code excludes counselling activity that is part of a rehabilitation program as defined in code 3.

Rehabilitation – refers to an intensive treatment program that integrates a range of services and therapeutic activities that may include counselling, behavioural treatment approaches, recreational activities, social and community living skills, group work and relapse prevention. Rehabilitation treatment can provide a high level of support (i.e., up to 24 hours a day) and tends towards a medium to longer-term duration. Rehabilitation activities can occur in residential or non-residential settings.

Pharmacotherapy – refers to pharmacotherapies that include those used as maintenance therapies (e.g., naltrexone, buprenorphine and specialist methadone treatment). The code 'withdrawal management (detoxification)' is used where a pharmacotherapy is used solely for withdrawal.

Support and case management only – refers to support and case management offered to clients (e.g., treatment provided through youth alcohol and drug outreach services). This choice only applies where support and case management treatment is recorded as individual client data and the treatment activity is not included in any other category.

Information and education only – refers to when there is no treatment provided to the client other than information and education. It is noted that, in general, service contacts would include a component of information and education.

Assessment only – refers to when there is no treatment provided to the client other than assessment. It is noted that, in general, service contacts would include an assessment component.

Other

These definitions are to be coded to record 'the main activity determined at assessment by the treatment provider to treat the client's alcohol and/or drug problem for the principal drug of concern.' For brief interventions, 'the main treatment type may apply to as few as one contact between the client and agency staff.'

We found that agencies, and even different people within the same agency, interpreted the service categories in markedly different ways. For example, respondents had little difficulty understanding the definitions of 'withdrawal management (detox)', 'pharmacotherapy', and 'counselling'. They were clear about 'residential rehabilitation', but were uncertain about 'non-residential rehabilitation'. They were uncertain or confused about the content of 'support and case management only', 'information and education only', 'assessment only', and 'other'.

One provider commented that clinicians on the ground used these terms in ways that differed from the NMDS definitions, and suggested that the people delivering the services should be directly involved in the choice of a transparent set of descriptors.

Some States use local expressions for a standard suite of services – for example, 'counselling, consultation, and continuing care [CCCC]' or 'Rural Drug Withdrawal & Rehab Service' in Victoria, or 'Counselling, treatment and referral services' in Western Australia.

As we have seen above, the NHS *Models of Care* takes a quite different approach to describing what services are offered. The evidence-based treatment modalities available in this structure include open access services, advice and information services, needle exchange facilities, care planned counselling, structured day programs, community prescribing, inpatient drug use treatment, and residential rehabilitation.

Tier 1 services work with drug and alcohol users through primary care providers, social workers, teachers, community pharmacists and probationary officers, and offer screening, assessment and referral to specialised AOD treatment.

Tier 2 services provide accessible specialist AOD services to engage users in treatment and reduce drug-related harm through needle exchange, advice and information, and *ad hoc* support services.

Tier 3 offers structured programs of care including interventions such as CBT, structured counselling, methadone maintenance, community detox, and day care either as an abstinence program or as an adjunct to pharmacotherapy. The user receives a drug assessment and an agreed care plan.

Tier 4a comprises residential AOD specific services including inpatient detox and residential rehabilitation. Tier 4b services include specialist liver units and forensic services for mentally ill offenders.

A set of descriptors based on a framework of this sort would give a clearer picture of the availability of primary care and specialist AOD treatment services.

Differences of purpose and method in NMDS and COTSA

For the future of data collection in this field, it may be useful to comment briefly on some features of the NMDS and COTSA source data.

First, the ANCD's intention was to map a wider range of resources than AODTS-NMDS sets out to cover. The AODTS-NMDS is a subset of AOD treatment services information routinely collected by the Australian Government, States and Territories to monitor the treatment services that receive funding from their jurisdictions; that is, all publicly funded government and non-government agencies that provide one or more specialist alcohol or other drug treatment services, residential and non-residential. It does not cover private treatment agencies that do not receive public funding. Alcohol and drug units in hospitals are included only if they provide outpatient services.

Other services not included in the NMDS are agencies whose sole activity is to prescribe or dose for opioid pharmacotherapy maintenance treatment; agencies whose primary function is accommodation or overnight stays such as 'halfway houses' and 'sobering-up shelters', or to provide services concerned with health promotion such as needle and syringe exchange programs; treatment services based in correctional institutions; and people who sought advice or information but were not formally assessed and accepted for treatment.

Wherever reliable information was available, services in these excluded categories have been included in the database for the ANCD mapping project.

The COTSA census had different aims. Its chief purpose was to identify characteristics of clients in treatment for AOD problems, including demographics, main drug problem, drugs injected, and treatment received, and also to identify changes within groups such as younger substance users, women, injecting drug users, prisoners, NESB substance users, Indigenous people, and non-metropolitan substance users. The data were compared with the results of previous censuses in 1990, 1992 and 1995 to identify changes in these categories over time.

To be identified as treatment service, an agency had to provide one or more face-to-face specialist treatment services to people with alcohol and/or other drug problems. The range of services covered by this definition was very wide, including among others a variety of outpatient treatment services, inpatient rehabilitation programs, detoxification, therapeutic communities, methadone maintenance plus an additional service, and smoking cessation programs. Only agencies with treatment of AOD problems as a primary goal were included, and self-help groups, sobering-up centres, and services that provided only information, education,

accommodation, brief counselling and crisis interventions were not classified as specialist treatment agencies.

Information about an agency's treatments were obtained by a simple question whether the agency offered detoxification, methadone maintenance, assessment, rehabilitation, counselling, referral, education, information, accommodation, self-help, work programs, or other services, with no further definition of these terms.

For obvious reasons of purpose and method, the outputs from these two collections are in quite different forms. Since the principles of inclusion also differed, the lists of agencies do not coincide: nearly half the agencies listed by NMDS did not take part in the COTSA census, and just under 40% of the respondents to the COTSA census are not listed in NMDS. As a further complexity, the two collections handle multiple programs within single auspices in different ways. Where the two sets of source data overlapped and asked similar questions, answers from the agencies were not always consistent.

It will be important to seek some consensus on the profile of services that legitimately represent AOD treatment capacity in each sector.

For the purposes of this project, we have erred in the direction of including a service if at least one of its primary goals was to offer AOD treatment of a recognised sort. Private sector services have been included where we had adequate data, and some self-help groups, sobering-up centres, and services that provided only information, education, accommodation, brief counselling and crisis interventions have been included when it was clear they represented capacity in the treatment system.

Other features of capacity

The ANCD hoped the project could give specific details about a number of topics that should be part of the measure of the sector's capacity – treatment models or approach, proportion of services catering for specific sub-populations, focus on specific substances, the longevity of funding, treatment capacity and waiting times, and staff profiles and qualifications.

Some of the questions in both NMDS and COTSA seek parts of this information in somewhat different ways, and the results were not always clear or consistent. In any case, the information was between two and three years out of date when the present database was compiled. Moreover, there was no corresponding source of these details for many of the over 500 additional agencies we have included. In early discussion with the ANCD, we agreed that an attempt to record these features exhaustively was unlikely to succeed.

We have therefore made a partial attempt to begin addressing these issues by including a field that contains brief descriptive notes whenever such information was available. In light of the fact that these features are self-evidently important to assessing capacity, we propose that the design of future instruments for gathering data about sector services build in questions of this sort in a consistent and agreed manner.

Pharmacotherapy and methadone maintenance

As we have seen, all the agencies we contacted were asked if they offered inpatient or outpatient pharmacotherapy, and the resulting database contains that information. It was our initial intention to compile maps showing the location of these services and of other sources of methadone maintenance. However, the data available to us did not support this intention.

While all the jurisdictions were asked about the availability of data on methadone prescribing, only four jurisdictions provided us with this information, and in different forms. Two provided lists of medical prescribers by name, town and postcode; one provided the locations of four clinics, two private prescribers, and ten dispensaries; and one provided a list of 388 private prescribers and 410 dispensaries by town and postcode. It was plainly not possible to combine this partial information with the treatment agency data in a realistic physical map.

An additional issue in mapping the locations of methadone and buprenorphine prescribers is that postcode data is potentially misleading, in that it gives the registered address of licensed prescribers, but not the places where the prescribing happens. For this purpose, it would be necessary to map locations by provider number, since the prescribing doctor has a separate provider number for each location where he or she practises.

For these reasons, the ANCD has agreed to consider any further investigation of this aspect of capacity as a separate project.

Future use of the mapping resource

In addition to this report and the maps contained in Appendix 4, the list of treatment agencies has been made available to the ANCD as a database, together with an interactive electronic map which can be queried to display additional information about location, approach, and the services available.

As we have pointed out, changes happen constantly and rapidly in this field, and some of the information that was current at the end of this project may be out of date in a very short time. It would be a relatively simply step for an agreed auspice to post a database with appropriate fields on the internet, and give each listed agency password-protected access to amend or update their own entry when changes occur, or at prompted regular intervals.

Perhaps more importantly, we hope that the observations we have made in compiling this resource will be useful to the councils and research bodies which design and carry out periodic data collection in this field in agreeing on definitions and a data dictionary that will afford the AOD field an evidence-base comparable in value and efficacy with collections in other areas of health and well being.

Indicators of need in alcohol and other drugs

In the absence of either an agreed ATOD-Specific Needs Index or a resource allocation formula for ATOD treatment services in Australia, no one is in a position at this moment to say with any authority whether the extent and nature of resource allocation in the sector is appropriate.

In light of major differences in organisational and regional structure at the State level, many of the participants in the national workshop felt it probably would not add value to the current system to develop a national resource allocation model. Nevertheless, we recommend further work to develop reliable and valid indicators of need in the ATOD area for planning and policy use.

The sector agrees that it would be useful to commission a *Models of Care* type project at the national level. This national project would then provide guidance to States and Territories about what treatment elements to fund if the objective is to have evidence-based systems for treating and preventing alcohol and other drug problems.

While there are lessons to be learnt from the work undertaken by the NHS and by some Australian jurisdictions, the issues specific to all Australia, such as Indigenous issues and geographic distances, need to be considered.

Recommendations

1. We therefore *recommend* that the ANCD endorses the development of an ASNI to offer reliable and valid indicators of need in the ATOD area for planning and policy uses, drawing on the research and experience set out in Chapter 2.
2. We *recommend* that the States and Territories consider developing resource allocation formulas for use within their jurisdictions, also drawing on the experience described in the literature.
3. We *recommend* further work to develop reliable and valid indicators of need in the ATOD area for planning and policy use.
4. We *recommend* that the ANCD, in collaboration with the jurisdictions, commissions development of evidence-based commissioning guidelines or models of care appropriate for regional use in Australia, building on the experience in the NHS.
5. We *recommend* that a process similar to the method employed by the NHS in developing *Models of Care* be applied in Australia at the national level.
6. We *recommend* steps to keep the current database up-to-date and reliable (for example, annual telephone surveys supplemented by information from States and Territories about new services funded, and web-based opportunities for agencies securely to amend or update their own entries when changes occur or at prompted regular intervals).
7. We *recommend* that the ANCD considers whether it will add value to map current pharmacotherapy capacity by individual prescribers and dispensers.
8. We *recommend* that the design of future instruments for gathering data about sector services builds in consistent and agreed questions about treatment models or approach, proportion of services catering for specific sub-populations, focus on specific substances, the source and longevity of funding, treatment capacity and waiting times, and staff profiles and qualifications.
9. We *recommend* that the ANCD refers the results of the mapping exercise and the accompanying observations to the IGCD to apply the implications for AODTS-NMDS and any future census of treatment services such as COTSA (in particular, the scope of the data collection, consensus on the profile of services that legitimately represent AOD treatment capacity in each sector, ways to capture both primary care and specialist AOD treatment services, and an agreed set of descriptors reflecting actual practice in the field).

Appendices

Appendix 1: Construction of an ATOD-Specific Needs Index (ASNI)

While the Sydney workshop believed a national resource allocation model at this point might not add value to the current system, at some future time the ANCD may wish consider the best way to work with jurisdictions to develop an Australian resource allocation method specific to and appropriate for the ATOD area. This appendix suggests options for developing an ATOD-Specific Needs Index (ASNI) built on the available literature, and experience in other areas of health care.

Option A: Factor analysis followed by multiple regression analysis

This approach involves commissioning a study to look specifically at indicators of ATOD-related need and the construction of a factor based on these indicators. Selection of indicators would be based on a detailed review of the relevant literature and collation of data from the existing data set. This part of the project would represent a one-off study, with data obtained from all relevant data sets, and possibly limited to the year of the most recent Census, to make maximum use of that database. Factor Analysis involving these indicators should be conducted in light of the issues raised in this paper.

Following the construction of the factor, the next step is to conduct a Multiple Regression Analysis with a range of indicators predicting the factor. The selection of indicators (e.g., social indicators, etc.) would be on the basis of:

a. how readily accessible they are

b. how expensive they are to access

c. how frequently the relevant databases are updated.

Predictors would be entered into the regression equation on the basis of these three criteria. As mentioned, the aim of such an analysis is to construct a factor based on the predictor that has the strongest possible relationship to the criterion variable, in this case, the factor derived from the previous stage of the study. In this specific case, the formula derived to construct the factor based on predictors would represent the ASNI. The manner of its construction would mean that it would be:

a. based on relevant research

b. relatively easy and inexpensive to access the required data to feed into the formula.

Option B: Factor analysis

The second option is to not commission a specific study to investigate more direct indicators of need and derive a factor based on these indicators, but instead, to construct an ASNI derived from a single Factor Analysis including data (e.g., social indicators etc.) that meet the criteria of being:

a. readily accessible

b. relatively inexpensive to access

c. obtained from databases that are frequently updated.

While Option B represents the less expensive approach, it would produce an ASNI that could arguably be less closely linked to relevant research on ATOD-specific indicators of need.

Possible indicators and related questions

Examples of possible indicators are provided below. It is important to keep in mind the differences between individual level data and aggregate data, and the possibility of the ecological fallacy. To highlight this issue, questions relevant to the use of such indicators at the aggregate level (e.g., LGA) are included. One means of facilitating the selection of appropriate indicators might be to present the issue to a panel of experts.

Socio-economic status (from Social Security): are individuals from areas of lower socio-economic status more likely to abuse (specific types of) substances?

Consumption: are individuals from areas where there is greater consumption of substances more likely to abuse (specific types of) substances?

Number of liquor outlets: are individuals living in areas with a higher number of liquor outlets more likely to abuse (specific types of) substances? Do people buy in one location and consume in another?

Drug related arrests: are individuals who live in areas where there are more drug related arrests more likely to abuse (specific types of) substances?

Substance abuse-related morbidity: postcodes of individuals presenting to health services with substance use related problems. Are individuals living in areas where a higher proportion of the population present to health services with substance use-related problems more likely to abuse (specific types of) substances?

Remoteness: are individuals living in more remote areas more likely to abuse (specific types of) substances?

Minority group membership: are individuals living in areas that have a high proportion of residents from minority groups more likely to abuse (specific types of) substances?

Racial mix: are individuals living in areas where there is a greater number of minority groups more likely to abuse (specific types of) substances?

Male/female ratio: are individuals living in areas where there is a higher proportion of males more likely to abuse (specific types of) substances?

Unemployment: are individuals living in areas where there is a higher proportion of unemployed more likely to abuse (specific types of) substances?

Occupation: are individuals living in areas where certain types of occupations (e.g., mining, fishing) predominate, more likely to abuse (specific types of) substances?

Weighting population size by the ASNI

The purpose of the ASNI is to identify those areas that require a greater or lesser share of available resources than would otherwise be allocated on the basis of population size alone. One of the primary issues here is the fact that a simple multiplication of the ASNI by population size will not provide an estimate of the number of individuals considered to be at risk. The issue of how strong an influence the ASNI should have must take into account the need for the shift from current levels of resource allocation to be gradual. The final decision regarding the impact of the ASNI is probably best made through in iterative process of:

Step 1: Multiplying regional population sizes by the ASNI.

Step 2: Calculating the share of resources allocated to regions based on the above result.

Step 3: Examining the differences between current allocations and those suggested by the ASNI formula (referred to as *residuals*).

Step 4: Transforming the ASNI (e.g., calculating the square root, etc.) in such a way as to increase or decrease its influence to bring the ASNI-based resource allocation more into line with current resource allocation.

Repeating Steps 1 to 4 above until a satisfactory outcome is achieved.

Over time, feedback from communities on the need for services (including service providers) may indicate the need to increase the influence of the ASNI in determining resource allocation. This would involve changing the statistical transformation of the ASNI before multiplying it by population sizes.

A consideration at this stage is the possibility of limiting the population of interest to only those falling within an age range that represents individuals who may use ATOD-related treatment services.

Factoring in the cost of providing services

This part of the resource allocation process would involve:

Step 1: Identifying variables that may affect the cost of providing services to different regions.

Step 2: Constructing a cost index based on a factor analysis of the variables selected above.

The cost index could be use in a number of ways. First, it could be used to predict the residuals remaining after the prediction of current funding from the formulas detailed above using population size and the ASNI. This analysis would enable appraisal of the extent to which current funding is affected by the cost of providing services.

The cost index could also be used in the iterative process detailed below:

Step 1: Multiplying ASNI weighted resources allocation by the cost index.

Step 2: Calculating the share of resources allocated to regions based on the above result.

Step 3: Evaluating the resulting shift in resource allocation on the basis of whether or not it represents a fair distribution of resources.

Step 4: If the resulting redistribution has not reached standards of fairness or represents too extreme a deviation from current funding, then transform the cost index (e.g., calculating the square root, etc.) in such a way as to increase or decrease its influence.

Repeating Steps 1 to 4 above until a satisfactory outcome is achieved.

Appendix 2: Workshop participants

Robert Ali	Australian National Council on Drugs
David Clarke	NT Department of Health and Community Services
Tracey Cook	Australian Government Department of Health and Ageing
Richard Cooke	South Australian Department of Health
David Crosbie	Australian National Council on Drugs
Nick Goddard	Tasmanian Department of Health and Human Services
Margaret Hamilton	Australian National Council on Drugs
Jenny Hefford	Australian Government Department of Health and Ageing
Devon Indig	NSW Health
Helen Lapsley	UNSW, guest speaker
Paul McDonald	Victorian Department of Human Services
Hayden McDonald	Mipela (GIS)
David McGrath	NSW Health
Mel Miller	Siggins Miller
Chris Moon	NT Department of Health and Community Services
Jim Pearse	University of Wollongong, guest speaker
Kim Petersen	South Australian Department of Health
Chrysanthe Psychogios	Australian Institute of Health and Welfare
Carol Riedell	Victorian Department of Human Services
Beverley Sander	Queensland Health
Helen Sherrell	Siggins Miller
Ian Siggins	Siggins Miller
Gavin Stewart	Centre for Mental Health NSW Health, guest speaker
Neill Taylor	ANCD Secretariat
Ian Thompson	ACT Health
Gino Vumbaca	ANCD Secretariat
Brian Watters	Australian National Council on Drugs
Karen Wolanski	Queensland Health
Louise York	Australian Institute of Health and Welfare

Apologies were received from WA Health.

Appendix 3: Australian AOD agencies and their treatment services

Australian Capital Territory

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ACT Community Health AOD Program, Canberra Hospital, Yamba Drive, Garran 2606	Govt	•	•	•	•			•	•	•	•	•	•		•		•
ACT Community Health AOD Program, Wruwallin Clinic, Civic Square 2600	Govt				•				•		•		•		•		•
ACT Division of General Practice, 4/19 Trenerry St, Weston Creek 2611	NGO		•		•						•		•				
Alcohol & Drug Foundation ACT (ADFACT) Karralika Therapeutic Community, 155 Keverstone Ct, Isabella Plains 2904	NGO					•				•							
Canberra Alliance for Harm Minimisation and Advocacy (CAHMA), 19 Bunda St, Canberra 2600	NGO												•				•
Centacare, The Lodge, Quick St, Campbell 2601	NGO					•											
Directions ACT, Arcadia House, Mary Potter Drive, Bruce 2617	NGO	•															
Directions ACT, Assisting Drug Dependents, 35 East Row, Canberra City 2601	NGO		•		•				•				•		•	•	
Gugan Gulwan Youth Aboriginal Corporation, 46 Quiros St, Red Hill 2603	ATSI	•															
Salvation Army Mancare, 5–15 Mildura St, Fyshwick 2609	NGO					•											
Salvation Army, Recovery Services Centre, 5–15 Mildura St, Fyshwick 2609	NGO			•	•	•	•			•	•	•	•	•	•		•
Ted Noffs Foundation, 350 Antill St, Watson 2602	NGO	•				•											
Toora Women Inc, Toora House Wimmins Shelter, Watson 2602	NGO					•				•							
Winnunga Nimmityjah AMS Substance Misuse Service, 91A Wakefield Gardens, Ainslie 2602	ATSI				•						•		•				
Women's Information Resources & Education on Drugs & Dependency (WIREDD), Griffin Centre, Civic Square 2600	NGO									•							

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Abstinence Maintenance Service, 1–11 Hainsworth St, Parramatta 2150	Govt				•												
Adele House, 39A Cornelia Rd, Toongabbie 2146	NGO			•	•	•				•	•		•		•		•
Albury Base Hospital, Borella Rd, Albury 2640	Govt										•				•		
Albury CHC, 596 Smollett St, Albury 2640	Govt		•		•				•		•		•		•		
Alcohol & Drug Information Service (ADIS), 366 Victoria St, Darlinghurst 2010	Govt				•								•				
Alcohol and Drug Foundation, 144A St Johns Rd, Glebe 2037	NGO			•	•	•	•			•	•	•	•	•	•		
Armidale CHC, Cnr Rusdan & Butler Sts, Armidale 2350	Govt		•		•				•		•				•		
Ashfield CHC, 46 Charlotte St, Ashfield 2131	Govt				•								•		•		
Auburn CHC, 9 Northumberland Rd, Auburn 2144	Govt				•								•		•		
Auburn Medical Referral Centre, 20 Mary St, Auburn 2144	Private								•				•		•		
Australian Defence Force Eastern Region, ADPA Wylde St, Potts Point 2011	Govt	•		•	•	•	•			•	•		•		•		
Awabakal AMS Substance Abuse Counselling Program, Denison St, Hamilton 2305	ATSI			•	•	•	•	•	•	•	•	•	•	•	•		
Ballina CHC, Cherry St, Ballina 2478	Govt				•						•				•		
Bankstown CHC, Raymond St, Bankstown 2200	Govt				•								•		•		
Bankstown D&A Service, Raymond St, Bankstown 2200	Govt		•		•		•				•		•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Barnados Australia, Mount Pleasant 2747	NGO				•								•		•		•
Barrier Division of General Practice, 248 Oxide St, Broken Hill 2880	NGO				•								•				
Bathurst CHC, 158 William St, Bathurst 2795	Govt				•								•		•		
Bathurst Correctional Centre, Browning St, Bathurst 2795	Govt			•		•				•		•		•			
Baulkham Hills CHC, 183–187 Excelsior Ave, Castle Hill 2154	Govt				•								•		•		
Bega CHC, McKee Drive, Bega 2550	Govt	•	•		•								•		•	•	•
Bellingen Valley CHC, Church St, Bellingen 2454	Govt				•										•		
Bennelong's Haven Family Rehabilitation Centre, 2054 South West St, Kinchela Creek via Kempsey 2440	ATSI			•		•				•		•		•			
Birpi Aboriginal Medical Centre Counselling Harm Reduction Program, Old Pacific Highway, Purfleet via Taree 2430	ATSI				•			•		•			•		•		
Blacktown A&OD Family Services, 119 Flushcombe Rd, Blacktown 2148	Private				•										•		
Blacktown CHC, 1 Marcel Cres, Blacktown 2148	Govt				•								•		•		
Blacktown Methadone Unit, 1 Marcel Cres, Blacktown 2148	Govt				•			•							•		
Blue Mountains District Anzac Memorial Hospital, Woodlands Rd, Katoomba 2780	Govt	•		•						•				•			
Blue Mountains District Anzac Memorial Hospital, Woodlands Methadone Clinic, Woodlands Rd, Katoomba 2780	Govt							•		•					•		
Bourke Aboriginal Health Service D&A Program, 61 Oxley St, Bourke 2840	ATSI				•					•			•				

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Bourke CHC, Mental Health Team, 26 Tarcoon St, Bourke 2840	Govt				•												
Bourke Street Houses, Bourke & Liverpool Sts, Darlinghurst 2010	Govt			•		•				•		•			•		
Bowral CHC, 64 Bendooley St, Bowral 2576	Govt		•		•								•		•		
Brewarrina Aboriginal Medical Service Men's Support Group, 5 Sandon St, Brewarrina 2839	ATSI				•												
Brewarrina D&A Committee (Bulgan Place), 95 Bathurst St, Brewarrina 2839	ATSI									•		•					
Broken Hill CHC, Thomas St, Broken Hill 2880	Govt				•										•		
Building Trades Group D & A Committee, PO Box 1145, Rozelle 2039	NGO				•	•							•				
Bungora Unit, 2 Uronga Pde, Wollongong 2500	Govt				•			•		•		•			•		
Byron Bay CHC, Shirley St, Byron Bay 2481	Govt				•					•					•		
Cabramatta Community Centre Parent/Youth D&A project, Cnr McBurney Rd & Railway Pde, Cabramatta 2166	ATSI				•					•					•		•
Cabramatta Drug Health Services & Harm Reduction Program, 57 Anthony St, Fairfield 2165	Govt				•								•		•		
Camden Haven CHC, Laurie St, Laurieton 2440	Govt				•										•		
Campbelltown CHC, Cordeaux St, Campbelltown 2560	Govt		•		•								•		•		
Canterbury Drug Health Service, Cnr Canterbury & Thorncraft Rd, Canterbury 2193	Govt				•								•				
Canterbury Multicultural Youth Health Service (CMYHS), Redman Parade, Belmore 2192	Govt				•					•			•				

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Cardinal Freeman Hostel, St Vincent de Paul, 34 East St, Granville 2142	NGO									•		•		•			
Casino CHC, Hotham St, Casino 2470	Govt				•						•				•		
Cellblock Youth Health Service, 142 Carillon Ave, Camperdown 2050	Govt				•		•				•		•		•		
Central Coast Health AOD Service, Gosford Hospital, Holden St, Gosford 2250	Govt	•	•		•				•						•		•
Central Sydney AHS Drug Health Services, Rozelle Hospital, Cnr Church & Glover St, Leichhardt 2040	Govt	•			•	•							•		•		
Centre for Addiction Medicine, 5 Fleet St, North Parramatta 2151	Govt	•	•							•		•		•			
Cessnock CHC, View St, Cessnock 2325	Govt		•							•		•		•			
Cessnock Correctional Centre, Lindsay St, Cessnock 2325	Govt		•		•					•		•		•			
Cessnock D&A Pharmacotherapy Unit, View St, Cessnock 2325	Govt							•									
Chatswood Community D&A Services, 13 Albert St, Chatswood 2067	Govt		•											•		•	
Chemical Use In Pregnancy Service (CUPS), Langton Centre, 591 South Dowling St, Surry Hills 2010	Govt									•				•			
Chifley Cottage Methadone Unit, Bathurst Health Service, Howick St, Bathurst 2795	Govt	•						•		•							
Child & Family Health Gosford AOD Service, 237 Mann St, Gosford 2250	Govt		•										•				
City Care – D.A.R.E. Central Hillsong Emerge, 149 Pitt St, Redfern 2016	NGO	•	•			•	•			•		•		•			
City Care Newcastle D&A Rehabilitation Centre, 85 Bourke St, Carrington 2300	NGO		•			•				•		•		•			

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
City Care Newcastle Women's Plus, 315–317 Wharf Rd, Newcastle 2300	NGO				•		•				•		•		•		
Co-As-It, 67 Norton St, Leichhardt 2040	NGO				•						•		•				
Come In Youth Resource Centre, St Francis Welfare, 457–9 Oxford St, Paddington 2011	NGO				•						•				•		
Concord Repatriation General Hospital Drug Health Services, Hospital Rd, Concord 2139	Govt		•		•				•		•		•				
Condobolin CHC, Madline St, Condobolin 2877	Govt			•	•							•	•	•	•		
Cooma CHC, Victoria St, Cooma 2630	Govt		•		•						•		•		•		•
Coonabarabran CHC, 101 Edward St, Coonabarabran 2357	Govt	•		•	•						•	•	•		•	•	•
Coopers Cottage, Campbelltown Hospital, Therry Rd, Campbelltown 2560	Govt	•	•		•			•	•		•		•		•		
Cootamundra CHC D&A Liaison Service, 37 Hurley St, Cootamundra 2590	Govt		•		•				•				•		•		•
Corella Drug Treatment Services, Fairfield Hospital, Cnr Restwell & Prairievale Sts, Prairiewood 2176	Govt	•	•							•	•				•		
Corowa CHC, D&A Liaison Service, 115 Sanger St, Corowa 2646	Govt		•		•				•		•		•		•		
Cowra CHC, Liverpool St, Cowra 2794	Govt		•		•				•		•		•		•		
Culcairn CHC D&A Liaison Service, Balfour St, Culcairn 2660	Govt	•		•	•						•		•		•		
Cyrenian House, ADF NSW, 112 Cavendish St, Stanmore 2048	NGO			•		•									•		
Dareton CHC, 44 Tapio Ave, Dareton 2717	Govt				•						•						

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Deniliquin CHC D&A Liaison Service, 2 Macauley St, Deniliquin 2710	Govt		•		•				•		•		•		•		
Detour House, 130 Glebe Point Rd, Glebe 2037	NGO			•		•				•				•			
Dharruk Aboriginal Medical Services D&A Services, 27 Mt Druitt Rd, Mt Druitt 2770	ATSI												•				
Doonside CHC, 30 Birdwood Ave, Doonside 2767	Govt				•								•		•		
Drug & Alcohol Court Assessment Program (DACAP) Youth Services, Atchison St, Wollongong 2500	Govt		•		•						•		•				
Drug & Alcohol Multicultural Education Centre (DAMEC), 295 Cleveland St, Strawberry Hills 2012	NGO												•				
Drug Arm Fairfield, 1–14 Court Rd, Fairfield 2165	NGO				•						•		•				•
Durri Aboriginal Health Services Substance Misuse Program, 1 York Lane, Kempsey 2440	ATSI				•		•		•		•		•		•		
Eden CHC, Imlay St, Eden 2551	Govt				•										•		
Emmanuel Renewal Centre 'The Oaks', Cooreena Rd, Dubbo 2830	NGO			•	•	•	•			•	•	•	•	•	•		
Erina CHC AOD Service, 169 The Entrance Rd, Erina 2250	Govt				•								•				
Fact Tree Youth Service, 703 Elizabeth St, Waterloo 2017	NGO				•						•		•				
Family Drug Support, 20 Page Ave, Ashfield 2131	NGO				•						•		•		•		•
Finley CHC D&A Liaison Service, Dawe St, Finley 2713	Govt		•		•				•		•		•		•		
Fleet St Methadone Clinic, 4A Fleet St, North Parramatta 2150	Govt				•				•								

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Foley House Incorporated, 6–8 Bellevue St, Surry Hills 2010	NGO			•				•		•		•		•			
Forbes CHC, Elgin St, Forbes 2871	Govt		•		•		•		•		•		•		•		
Forster/Tuncurry CHC, Breese Pde, Forster 2428	Govt		•		•						•		•		•		
Freeman House A&D Recovery Unit, St Vincent de Paul, 1 Crescent St, Armidale 2350	NGO		•			•	•						•				
Garden Court Clinic, 72 Enmore Rd, Enmore 2042	Private										•		•				
Glebe House Ltd, 5-7 Mount Vernon St, Glebe 2037	NGO			•		•				•		•		•			
Glen Innes CHC, Cnr Taylor and Ferguson Sts, Glen Innes 2370	Govt		•		•						•		•		•		
Glen Innes Correctional Centre, Gwydir Hwy, Glen Innes 2370	Govt			•		•				•		•		•			
Gloucester CHC, Church St, Gloucester 2422	Govt		•		•								•		•		
Goulburn CHC, Cnr Goldsmith & Faithful Sts, Goulburn 2580	Govt				•				•		•		•		•		
Goulburn Correctional Centre, Maud St, Goulburn 2580	Govt	•		•		•				•		•		•			
Grace Manor & Turn Around, Wesley Health Services, 28 Pinnacle St, Ashcroft 2168	NGO			•		•				•		•		•			
Grafton CHC, Arthur St, Grafton 2460	Govt				•						•				•		
Grafton Correctional Centre, Hoof St, Grafton 2460	Govt	•		•		•				•		•		•			
Griffith CHC, D&A Liaison Service, 39 Yambil St, Griffith 2680	Govt		•		•				•		•		•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Grow Community, 24th Avenue, Austral 2171	NGO			•		•				•		•		•			
Guthrie House, 10–14 Sebastopol St, Enmore 2042	NGO									•		•		•			
Hawkesbury District Health Service, Cnr Macquarie & Day Sts, Windsor 2756	NGO	•	•		•						•		•		•		
Haymarket Foundation Clinic, 165B Palmer St, East Sydney 2010	NGO				•								•		•		
High Street Youth Health Service, 65 High St, Harris Park 2150	NGO				•						•				•		
Holyoake (Centacare) Neutral Bay, 16 Lindsay St, Neutral Bay 2090	NGO				•	•							•		•		
Holyoake (Centacare) Newcastle, Cnr Union & Kenrick Sts, The Junction 2291	NGO				•	•							•		•		
Hornsby Ku-ring-gai Hospital Drug, Alcohol & Gambling Service, Palmerston Rd, Hornsby 2077	Govt				•	•		•					•		•		
Hunter Health Community Detox Service, Croudace Bay Rd, Belmont 2280	Govt	•	•		•								•		•		
Hunter Health Newcastle Pharmacotherapy Service, Watt St, Newcastle 2300	Govt							•									
Hunter Health Pharmacotherapy Outreach Project, Watt St, Newcastle 2300	Govt				•			•					•		•		
Illawarra AMS Substance Misuse Service, 329 Keira St, Wollongong 2500	ATSI				•	•					•		•		•		
Ingleburn CHC, 59a Cumberland Rd, Ingleburn 2565	Govt		•		•								•		•		
INTRA Outreach Drug Treatment Service, Cnr Friday Hut & Lismore Rds, Binna Burra 2479	NGO				•						•				•		
Inverell CHC, Swanbrook Rd, Inverell 2360	Govt		•		•				•		•		•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Jacaranda House, Liverpool Hospital, Elizabeth St, Liverpool 2170	Govt		•		•				•		•		•		•		
James Fletcher Hospital, Huon Unit, Watt St, Newcastle 2300	Govt			•							•						
James Fletcher Hospital, Kirkwood House, Watt St, Newcastle 2300	Govt				•		•		•				•				
Junction Youth Health Service, 123 Henry St, Penrith 2751	NGO				•						•		•		•		
Kalindi House, St Vincent de Paul, c/- 218 South Terrace, Bankstown 2200	NGO									•							
Kamira Farm, 539 Pacific Hwy, North Wyong 2259	NGO		•		•					•		•	•	•			
Kathleen York House, ADF NSW, 144A St Johns Rd, Glebe 2037	NGO		•		•					•		•		•			
Katoomba CHC, 93 Waratah St, Katoomba 2780	Govt			•		•							•		•		
Katungul Aboriginal Corp D&A Services, 26 Princes Hwy, Narooma 2546	ATSI			•							•		•				•
Kedesh House Rehabilitation Service, 303 Flagstaff Rd, Berkeley 2506	NGO		•	•		•				•	•	•	•		•		
Kempsey CHC, 119 River St, Kempsey 2440	Govt	•		•									•		•		
Kincumber CHC AOD Service, Shopping Village, Kincumber 2251	Govt			•									•				
Kirketon Road Centre, 100 Darlinghurst Rd, King's Cross 2011	Govt					•		•					•				
Kullaroo Clinic, 69–71 Holden St, Gosford 2250	Govt	•		•		•					•		•		•		
Kyogle CHC, Kyogle Rd, Kyogle 2474	Govt			•									•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Lakeview Unit, Belmont Hospital, Croudace Bay Rd, Belmont 2280	Govt	•				•							•				
Langton Centre, 591 South Dowling St, Surry Hills 2010	Govt		•		•		•		•		•		•		•		
Laurieton CHC, Laurie St, Laurieton 2443	Govt				•										•		
Lawrence Ave Methadone Program (LAMP Shoalhaven), 5–7 Lawrence Ave, Nowra 2541	Govt				•				•		•		•		•		
Leeton CHC D&A Liaison Service, Palm Ave, Leeton 2705	Govt		•		•				•		•		•		•		
Leichhardt Women's CHC, Thornley St, Leichhardt 2040	Govt				•						•		•		•		
Life Education NSW, 10 Hewitt St, Colyton 2750	NGO												•				
Lithgow CHC, 2 Coldrew Drive, Lithgow 2790	Govt		•		•				•		•		•		•		
Liverpool Drug Health Counselling, Cnr Campbell & Goulburn Sts, Liverpool 2170	Govt				•								•		•		
Long Jetty Healthcare Centre AOD Service, Wyong Rd, Killarney Vale 2261	Govt		•		•		•						•		•		
Lower Hunter CHC, Stronach Ave, Maitland 2320	Govt				•						•		•		•		
Lyndon Illicit Treatment Outreach Service, 6 Hereford Pl, Bletchington 2800	NGO						•						•				
Lyndon Therapeutic Community, Blatchford St, Canowindra 2804	NGO					•	•						•				
Lyndon Withdrawal Unit Bloomfield Campus, Forest Rd, Orange 2800	NGO	•				•		•	•				•		•		
Macksville CHC, Boundary St, Macksville 2447	Govt				•										•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Maclean CHC, 21 Union St, Maclean 2463	Govt				•						•				•		
Macquarie AHS D&A, Cnr Palmer & Cobra Sts, Dubbo 2830	Govt		•		•		•				•		•		•		
Mangrove Mountain CHC AOD Service, RMB 1640 Nurses Rd, Mangrove Mountain 2250	Govt				•						•				•		
Manly Drug, Education & Counselling, 91 Pittwater Rd, Manly 2095	NGO				•						•		•		•		
Marist Youth Care – Youth Outreach, 28 Hope St, Seven Hills 2147	NGO										•				•		
Marrin Weejali Aboriginal Corp AOD Referral Service, 3 Hindemith Ave, Emerton 2770	ATSI				•						•		•		•		
Maryfields Day Recovery Centre, Narellan Rd, Campbelltown 2560	NGO				•		•				•		•		•		
Mater Misericordiae Hospital D&A Unit (Lorna House), Edith St, Waratah 2298	Govt		•		•				•				•		•		
Mercy Community Services – Brighton, Newcastle 2300	NGO										•						•
Mercy Community Services – McAuley Outreach, 32 Union St, Tighes Hill 2287	NGO				•						•		•		•		
Mercy Community Services – The Lodge, Balickera 2324	NGO			•		•				•		•		•			
MERIT Program, Central Coast AHS, Holden St, Gosford 2250	Govt										•		•		•		
MERIT Program, Greater Murray AHS, 36a Fitzmaurice St, Wagga Wagga 2650	Govt										•		•		•		
MERIT Program, Hunter AHS, 72 Watt St, Newcastle 2300	Govt										•		•		•		
MERIT Program, Illawarra, 5 Rawson St, Wollongong 2500	Govt										•		•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
MERIT Program, Macquarie AHS, Hawthorn St, Dubbo 2830	Govt										•		•		•		
MERIT Program, Mid North Coast AHS, Wrights Rd, Port Macquarie 2444	Govt										•		•		•		
MERIT Program, Mid Western AHS, Summer St, Orange 2800	Govt										•		•		•		
MERIT Program, Northern Rivers AHS, 29 Molesworth St, Lismore 2480	Govt										•		•		•		
MERIT Program, South West Sydney AHS, Elizabeth St, Liverpool 2165	Govt				•						•		•		•		
MERIT Program, Southern AHS, 103 Crawford St, Queanbeyan 2620	Govt										•		•		•		
Merrylands CHC, 14 Memorial Ave, Merrylands 2160	Govt				•								•		•		
Metro Reception & Remand Centre, Corrective Services, Holker St, Sydney 2000	Govt	•		•		•				•		•		•			
Mid North Coast Correctional Centre, 370 Aldavilla Rd, Aldavilla 2440	Govt			•		•				•		•		•			
Mid North Coast D&A Services, Wrights Rd, Port Macquarie 2444	Govt		•		•		•		•				•		•		
Mission Australia MARS, 119 Macquarie St, Parramatta 2150	NGO									•		•		•			
Mission Australia, A Woman's Place, 94 Victoria St, Potts Point 2011	NGO			•	•							•	•				
Mission Australia, Campbell House, 19 Denham St, Surry Hills 2010	NGO			•						•		•					
Mission Australia, D&A Program, 317 Queen St, Campbelltown 2560	NGO										•		•		•		
Mission Australia, Fairlight Centre, 9 Fairlight St, Manly 2095	NGO									•		•		•			

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Mission Australia, Liverpool Centre, 55 Lachlan St, Liverpool 2170	NGO			•						•		•		•			
Mission Australia, Newcastle Adult Accommodation Support Service, Newcastle 2300	NGO															•	
Mission Australia, Opposition Youth Crisis Centre, 31 Roslyn St, Kings Cross 2011	NGO			•						•		•		•			
Mission Australia, Rawson Centre, Cnr Reiby & Rawson Sts, Newtown 2042	NGO			•								•		•			
Mission Australia, Triple Care Farm, 188 Knights Hill Rd, Robertson 2577	NGO			•		•				•		•		•			
Mission Australia, Women's Services, 182 Victoria St, Potts Point 2011	NGO									•		•		•			
Moree AMS, 180 Greenbah Rd, Moree 2400	ATSI				•								•		•	•	•
Moree CHC, Alice St, Moree 2400	Govt	•		•				•		•		•		•			
Moruya CHC South Coast Drug Treatment, Team River St, Moruya 2537	Govt	•		•		•		•									
Mount Druitt CHC, Cnr Buran Place & Kelly Close, Mt Druitt 2770	Govt			•								•		•			
Mount Druitt Integrated Youth Service, 44 Copeland Ave, Emerton 2770	NGO			•						•		•					
Mudgee CHC, 157 Church St, Mudgee 2850	Govt	•		•				•		•		•		•			
Mullawa Correctional Centre, Holker St, Sydney 2000	Govt		•		•					•		•		•			
Mullumbimby CHC, Azalea Ave, Mullumbimby 2482	Govt			•						•				•			
Namitjira Haven, Bundjalung Tribal Society, Whites Lane, Alstonville 2477	ATSI		•		•					•		•		•		•	

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Namoi House, Wee Waa St, Walgett 2832	Govt										•						•
Nar-Anon Family Groups Sydney, 164 Longueville Rd, Lane Cove 2066	NGO		•		•	•											•
Narellan CHC, 14 Queen St, Narellan 2567	Govt				•								•				
Narrabri CHC, 95 Barwon St, Narrabri 2390	Govt		•		•				•		•		•		•		
Nelson Bay CHC, Kerrigan St, Nelson Bay 2315	Govt				•						•		•		•		
Nepean Hospital D&A Service, Great Western Hwy, Kingswood 2747	Govt	•	•		•					•	•		•		•		
Newcastle CHC, Hunter St, Newcastle 2300	Govt	•		•	•	•				•	•	•	•	•	•		
Newcastle Youth Service, 149 Beaumont St, Hamilton 2303	Govt				•								•				
Ngaimpe Aboriginal Corp, The Glen AOD Rehabilitation Centre, 50 Church Rd, Chittaway Point 2259	ATSI			•		•				•	•			•	•		•
Northern Beaches D&A Community Program, Mona Vale Hospital, Coronation St, Mona Vale 2103	Govt				•		•				•		•		•		•
Northern Drug & Alcohol Court Assessment Program (DACAP), Cowper St, Warrawong 2505	Govt		•		•						•		•		•		
Northside Clinic, 2 Greenwich St, Greenwich 2065	Private	•	•	•				•		•				•			
Northside Clinic West, 23–27 Lytton St, Wentworthville 2145	Private	•	•	•				•		•				•			
NSW Department of Corrective Services, Aboriginal D&A Services, 24 Campbell St, Sydney 2000	Govt					•						•					
NSW Police Department, Drug Program Coordination Unit Aboriginal Street Beat Project, 14–24 College St, Sydney 2000	Govt										•						

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
NSW Users & AIDS Association, 345 Crown St, Surry Hills 2010	NGO										•						
O'Connor House, Hardy Ave, Wagga Wagga 2650	NGO	•	•							•				•			
Odyssey House Admissions Centre, 431 Elizabeth St, Surry Hills 2010	NGO														•		
Odyssey House After Care Program, 9 Patrick St, Campbelltown 2565	NGO				•		•						•				
Odyssey House Assessment & Referral Centre, 169 Campbelltown Rd, Ingleburn 2560	NGO			•		•						•		•			
Odyssey House Counselling Service, 518 Kent St, Sydney 2000	NGO				•								•		•		
Odyssey House TC Detoxification Unit, Minto, 169 Campbelltown Rd, Ingleburn 2560	NGO	•															
Odyssey House TC Main Treatment Facility, 13a Moonstone Place, Eagle Vale 2558	NGO					•						•		•			
Oolong House, 11 Junction St, Nowra 2541	ATSI			•		•						•					
Orana Haven Aboriginal Corp Gongolgon Rehabilitation Centre, 1 Byrock Rd, Brewarrina 2839	ATSI			•		•				•		•		•		•	
Orange CHC, 96 Kite St, Orange 2800	Govt		•		•				•		•				•		
Ozanam Shelter, St Vincent de Paul, 101 Hardinge St, Deniliquin 2710	NGO										•		•		•		
Parents Reaching Youth through Drug Education (PRYDE), 37 Cronulla St, Cronulla 2230	NGO												•				
Parkes CHC, Coleman Ave, Parkes 2870	Govt		•		•				•		•		•		•		
Parramatta CHC, 158 Marsden St, Parramatta 2150	Govt				•								•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Pathways, Prairievale Rd, Prairievale 2176	Govt				•								•		•		
Peakhurst CHC, 64 Stanley St, Peakhurst 2210	Govt				•										•		
Penrith CHC, 113 Soper Place, Penrith 2750	Govt				•		•						•		•		
Phoebe House, 220 Forrest Rd, Arncliffe 2205	NGO					•		•		•		•		•			
Phoenix Unit, Manly Hospital, 150 Darley Rd, Manly 2095	Govt	•	•		•								•		•		
Port Kembla Hospital, Cowper St, Warrawong 2502	Govt	•		•									•				•
Port Macquarie CHC A&ODS, 31 Morton St, Port Macquarie 2444	Govt		•	•		•		•					•				
Praxis Centre, Coffs Harbour Base Hospital, Pacific Highway, Coffs Harbour 2450	Govt	•	•	•				•	•				•		•		
Prince of Wales Hospital D&A, Barker St, Randwick 2031	Govt		•										•		•		
Psych 'n' Soul Addiction Treatment, Addiction & Psychological Treatment Services, 1 Bay Rd, Broadway 2007	Private	•		•													
Psych 'n' Soul Addiction Treatment, Addiction & Psychological Treatment Services, 67 McArthur St, Ultimo 2007	Private			•		•		•		•			•		•		
Quamby House, Rich's Lane, Albury 2640	ATSI					•						•		•			
Queanbeyan A&D Services and Killard Centre, 103 Crawford St, Queanbeyan 2620	Govt		•		•				•		•		•		•		
Queens Court Clinic, 11 Queen St, St Marys 2760	Private								•		•		•		•		
Queenscliff CHC D&A Service, Cnr Lakeside Cres & Palm Ave, Queenscliff 2069	Govt				•		•				•		•		•		•

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
R.E.A.D.Y. (Resources & Education on A & D for You), 18 Treacy St, Hurstville 2220	NGO				•								•		•		
RAAF 3 Combat Support Hospital, Ruth Base, Richmond 2755	Govt	•	•			•						•					
Raymond Terrace CHC, 59 Port Stephens St, Raymond Terrace 2324	Govt				•						•		•		•		
Redfern Aboriginal Medical Service, 132 Redfern St, Redfern 2016	ATSI				•				•		•				•		•
Regenesis, 175 Argyle St, Moss Vale 2577	NGO				•						•						
Richmond Fellowship of NSW, Penrith, 41 Brumby Cres, Emu Heights 2750	NGO									•			•		•		
Riverina Aboriginal Medical & Dental Corp Substance Abuse Program & Counselling Service, 14 Trail St, Wagga Wagga 2650	ATSI				•		•				•		•		•		
Riverlands Centre, Cnr Hunter & Uralba St, Lismore 2480	Govt	•		•	•				•		•						
Roy Thorne Substance Misuse Rehab Centre, 180 Greenbah St, Moree 2400	NGO			•		•		•		•		•		•			
Royal North Shore Hospital, Herbert St A&D Clinic, Herbert St, St Leonards 2065	Govt	•	•	•		•		•					•		•		
Royal Prince Alfred Hospital D&A Services, Page Building Level 5, Missenden Rd, Camperdown 2050	Govt				•				•		•		•		•		
Ryde Hospital D&A, 37 Fourth Ave, Eastwood 2122	Govt				•								•				
Salvation Army, Catherine Booth House, 348 Elizabeth St, Surry Hills 2010	NGO					•				•		•					
Salvation Army, Central Coast Recovery Service, Selah Farm, 60 Berkeley Rd, Berkeley Vale 2261	NGO	•				•						•					
Salvation Army, Endeavour Community, 1–8 Russell Rd, Morisset 2264	NGO			•		•		•		•		•		•			

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Salvation Army, Fairfield Youth Recovery Support Team (FYRST), 214 Sackville St, Canley Vale 2166	NGO				•						•		•				•
Salvation Army, Miracle Haven, 1–8 Russell Rd, Morisset 2264	NGO			•		•		•		•		•		•			
Salvation Army, Newcastle Recovery Services Centre, 102 Hannell St, Wickham 2293	NGO			•	•	•	•			•	•	•	•		•		
Salvation Army, Oasis Youth Support Network, 365 Crown St, Surry Hills 2010	NGO										•						
Salvation Army, Recovery Services, 85 Campbell St, Surry Hills 2010	NGO					•											
Salvation Army, St Peters Recovery Services Centre, 5 Bellevue St, St Peters 2044	NGO		•		•				•		•						
Salvation Army, William Booth House, 56 Albion St, Surry Hills 2010	NGO	•		•	•	•	•			•		•		•	•		
Sherwood Cliffs Christian Community, Glenreagh 2450	NGO	•		•		•				•		•		•			
Shoalhaven Community Development Patrol, 164 Junction St, Nowra 2541	ATSI										•						
Shoalhaven DACAP and Outpatient Services, 47 Berry St, Nowra 2541	Govt		•		•						•				•		
Singleton CHC, Boonal St, Singleton 2316	Govt				•						•		•		•		
South Coast AMS D&A Community Education and Counselling Service, 53 Berry St, Nowra 2541	ATSI				•		•				•		•				
South Pacific Private Hospital, 18 Beach St, Curl Curl 2069	Private	•		•		•		•		•		•		•			
South Sydney Youth Services, Cnr Elizabeth & Allen Sts, Waterloo 2017	NGO				•						•				•		
South West Alternative Programme (SWAP), 81 Cabramatta Rd, Cabramatta 2166	NGO				•						•		•		•		

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
South West Slopes CHC, D&A Liaison Service, Simpson St, Tumut 2720	Govt		•		•				•		•		•		•		
South West Sydney AHS D&A Directorate, Elizabeth St, Liverpool 2170	Govt												•				
South West Sydney AHS Drug Court Program, Elizabeth St, Liverpool 2170	Govt				•						•		•		•		
South West Sydney AHS Youth Drug Program, Elizabeth St, Liverpool 2170	Govt									•				•			
Springwood CHC, 288–292 Macquarie St, Springwood 2777	Govt				•								•		•		
St George Hospital D&A, 2 South St, Kogarah 2217	Govt		•		•								•		•		
St John of God Hospital and Health Services, 13 Grantham St, Burwood 2134	Private	•		•	•	•							•		•		
St John of God Hospital, Richmond, 177 Grose Vale Rd, North Richmond 2753	NGO	•		•		•		•		•		•		•			
St Laurence House, 43 Sturt St, Kingsford 2032	NGO									•		•		•			
St Marys Community D&A Services, 42 Gidley St, St Marys 2760	Govt				•		•						•				
St Vincent's Hospital A&D Service, Victoria St, Darlinghurst 2010	Govt				•		•				•		•				
St Vincent's Hospital, Gorman House Detoxification Unit, Victoria St, Darlinghurst 2010	Govt	•		•													
St Vincent's Hospital, Rankin Court Treatment Centre, Victoria St, Darlinghurst 2010	Govt					•		•		•							
Street Level Christian Community, 59–63 Pitt St, Parramatta 2160	NGO				•												
Substance Use In Pregnancy & Parenting Service (SUPPS Illawarra), Cowper St, Warrawong 2500	Govt									•	•						

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Sutherland Hospital, 430 The Kingsway, Caringbah 2229	Govt									•	•						
Sydney Clinic, 22–24 Murray St, Bronte 2024	Private	•		•	•	•	•	•	•			•	•	•			
Sydney Road Centre, 109 Sydney Rd, Manly 2095	Govt	•		•	•							•	•		•		
Sylvania CHC A&OD Team, 29 Sylvania Rd, Sylvania 2224	Govt				•								•		•		
Tamworth CHC, Johnson St, Tamworth 2340	Govt		•		•				•		•		•		•		
Tamworth Correctional Centre, Dean St, Tamworth 2340	Govt			•		•				•		•		•			
Taree CHC, 64 Pulteney St, Taree 2430	Govt	•			•			•			•		•		•		
Ted Noffs Foundation, Nepean Adolescent Family Counselling, 1 Caratel Ave, Hazelbrook 2779	NGO				•		•				•		•		•		
Ted Noffs Foundation, Out-Client Services Randwick, 150 Avoca St, Randwick 2031	NGO				•		•				•		•		•		
Ted Noffs Foundation, Out-Client Services Wollongong, 17 Staff St, Wollongong 2500	NGO				•		•				•		•		•		
Ted Noffs Foundation, PALM East, 150 Avoca St, Randwick 2031	NGO			•	•	•	•			•	•	•	•	•	•		
Ted Noffs Foundation, PALM North Coast, Albany St, Coffs Harbour 2450	NGO			•	•	•	•			•	•	•	•	•	•		
Ted Noffs Foundation, PALM West, 1–11 Hainsworth St, Westmead 2145	NGO			•	•	•	•			•	•	•	•	•	•		
Teen Challenge, 40 Hector St, Chester Hill 2162	NGO			•		•				•		•		•			
Tharawal Aboriginal Corp D&A Counselling Service, 187 Riverside Drive, Airds 2560	ATSI				•												•

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
The Buttery Inc Therapeutic Community, Lismore Rd, Binna Burra 2479	NGO					•				•		•					
The Glen A&D Rehabilitation Centre, 50 Church Rd, Chittaway Point 2261	NGO			•		•						•					
The Peppers Therapeutic Community, 257 Lake Albert Rd, Wagga Wagga 2650	NGO			•		•				•		•		•			
The Station Ltd, 82 Erskine St, Sydney 2001	NGO										•		•		•		
The Woman's Centre (Southern Sydney Women's Therapy Centre), 2 Carrington Square, Campsie 2194	NGO				•								•		•		
Toomelah Cooperative Security Program, Toomelah Aboriginal Reserve, via Boggabilla 2409	ATSI																•
Toronto Polyclinic, Hunter Health, James St, Toronto 2283	Govt				•					•		•		•			
Toukley CHC, AOD Service, Hargraves St, Toukley 2263	Govt				•									•			
Traxside Youth Health, Wollondilly CHC, 5–9 Harper Close, Tahmoor 2573	Govt				•					•		•		•			
Tweed Valley D&A and MERIT Program, 145 Wharf St, Tweed Heads 2485	Govt				•					•				•			
Upper Hunter D&A Service Muswellbrook, Brentwood St, Muswellbrook 2333	Govt				•									•			
Upper Hunter D&A Service Scone, Stafford St, Scone 2333	Govt	•	•	•	•								•	•			
Wagga Wagga Community Health D&A Services, Docker St, Wagga Wagga 2650	Govt		•		•				•				•	•			•
Walgett AMS D&A Support Project, 53 Fox St, Walgett 2832	ATSI		•		•								•	•			
Walgett Night Patrol, NSW Police, 57 Wee Waa St, Walgett 2832	Govt									•							

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Walgett SAAP Services, 99–101 Wee Waa St, Walgett 2832	NGO									•	•	•	•	•	•		
Wallsend CHC, Nash St, Wallsend 2287	Govt				•						•		•		•		
Waminda South Coast Women's Health, 1 Moss St, Nowra 2541	ATSI				•						•						
Wandene Private Hospital, Wesley Mission, 7 Blake St, Kogarah 2217	Private	•	•	•	•			•	•	•	•	•	•		•		
Wauchope CHC, High St, Wauchope 2446	Govt				•								•		•		
Waverley D & A Centre, 31–33 Spring St, Bondi Junction 2022	NGO				•								•		•		
Waverly Action for Youth Services (WAYS), 422 Oxford St, Bondi Junction 2022	NGO				•						•		•		•		
Waverly Action for Youth Services (WAYS), 63A Wairoa Ave, Bondi 2026	NGO				•						•		•		•		
Waverly Action for Youth Services (WAYS), 697 Anzac Pde, Maroubra 2035	NGO				•						•		•		•		
Wayback Committee Ltd, 65 Marion St, Harris Park 2150	NGO			•	•	•	•			•	•	•	•	•	•		
Wayside Chapel, 29 Hughes St, Potts Point 2011	NGO										•						
We Help Ourselves (WHOs), Central Sydney, Strawberry Hills 2012	NGO					•						•					
We Help Ourselves (WHOs), Hunter, Allandale Rd, Cessnock 2325	NGO					•						•					
We Help Ourselves (WHOs), MTAR South Sydney, Strawberry Hills 2012	NGO					•						•					
We Help Ourselves (WHOs), New Beginnings, Strawberry Hills 2012	NGO					•						•					

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Weigelli Centre Aboriginal Corporation, 1474 Pine Mount Rd, Woodstock 2793	ATSI	•		•	•	•	•	•	•	•	•	•	•				
Wellington Aboriginal Corp Health Service Substance Abuse Service, 68 Maughan St, Wellington 2820	ATSI				•						•		•		•		•
Wentworth AHS Methadone Unit, Gateway Clinic, Great Western Hwy, Kingswood 2747	Govt				•				•		•		•		•		
Wentworth Centre Ambulatory Detox, Unit 90 Henry St, Penrith 2750	Govt		•		•						•				•		
Wentworth Centre for D&A Medicine, 90 Henry St, Penrith 2750	Govt	•		•	•							•	•	•	•		•
Wentworth Centre Inpatient Detox Unit, 90 Henry St, Penrith 2750	Govt	•			•							•		•			
Wesley Private Hospital, Wesley Mission, 91 Milton St, Ashfield 2131	Private	•		•	•	•				•	•	•	•	•	•		
West Mount Drug & Alcohol Treatment Centre, 6 East View Ave, Leura 2780	NGO				•	•				•	•						
Western Sydney AHS Drug Courts Program, 1–11 Hainsworth St, Westmead 2150	Govt				•			•					•		•		
Western Sydney D&A Resource Centre (WESDARC), 513–519 Reserve St, Penrith 2747	NGO												•				
Windale CHC, Cnr South & Cherry St, Windale 2306	Govt				•						•		•		•		
Windsor CHC, Macquarie St, Windsor 2756	Govt	•			•		•			•	•		•		•		
Wollongong Crisis Centre, Berkeley 2506	NGO	•				•				•	•				•		
Women's A&D Action Committee – Jarrah House, 1414 Anzac Parade, Little Bay 2036	NGO	•		•	•	•		•		•	•	•	•	•	•		
Woy Woy CHC AOD, Service Ocean Beach Rd, Woy Woy 2256	Govt				•								•				

This list was finalised between July and October 2004

New South Wales

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Woy Woy Hospital AOD Service, Ocean Beach Rd, Woy Woy 2256	Govt		•		•		•					•	•	•	•		
Wyong CHC AOD Service, Pacific Hwy, Hamlyn Terrace 2259	Govt		•		•		•						•		•		
Wyong Hospital, Central Coast Health Pacific Hwy, Hamlyn Terrace 2259	Govt	•															
Young CHC, Hospital, Demondrille St, Young 2594	Govt				•								•		•		
Young People Prevention and Early Intervention (YPPI) – A/A & 'Bong Off' Cannabis Intervention, 89 Holden St, Gosford 2250	Govt										•						
Youth Off the Streets, Dunlea Adolescent AOD Program, 74–98 Kenyons Rd, Merrylands 2160	NGO			•	•	•	•			•	•	•	•		•		
Youth Off the Streets, Foundation House, Military Drive, Rozelle Hospital, Rozelle 2039	NGO			•	•	•						•	•		•		
Youth Solutions, 112 Macarthur Sq, Gilchrist Drive, Ambervale 2560	NGO												•				

This list was finalised between July and October 2004

Northern Territory

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
A New Start Towards Independence (ANSTI), Lot 175 Bees Creek Rd, Palmerston 0830	NGO	•		•		•	•			•	•	•	•	•	•		•
Alawa Aboriginal Corp Warden's Project, Hodgson Downs Community, via Katherine 0852	ATSI										•						
Alcohol and Other Drugs Service, Building 9 North, Royal Darwin Hospital, Tiwi 0810	NGO				•								•		•		•
Alcohol Awareness & Family Recovery – Darwin, 18 Geranium St, Darwin 0800	Govt	•	•	•	•						•		•		•		•
Alice Springs Youth Accommodation Service Bush Mob Project, Todd Mall, Alice Springs 0870	NGO																•
Ali-Curung Council Association Night Patrol & Safe House, Ali-Curung Community, via Alice Springs 0872	ATSI										•						
Alpurrurulam Community, Night Patrol Alpurrurulam, Community NT, via Mt Isa 4825	ATSI										•						
Amity Community Services 155 Stuart Hwy, Parap 0801	NGO		•		•				•				•				•
Angurugu Community Government Council, Angurugu, via Darwin 0822	ATSI				•		•										•
Anyinginyi Congress Aboriginal Corporation, 261 Schmidt St, Tennant Creek 0860	ATSI						•						•				
Apatula Community (Finke River), Apatula Night Patrol, Apatula Community, via Alice Springs 0872	ATSI										•						
Areyonga Community, Areyonga Community Patrol, Areyonga Community, via Alice Springs 0872	ATSI										•						
Banyan House, 16 Beaton Rd, Berrimah 0828	NGO			•	•	•	•										•
Barkly Region A&D Abuse Advisory Group, 29 Staunton St, Tennant Creek 0860	NGO	•		•	•	•		•			•	•	•	•			•
Borroloola Mabunji Aboriginal Resource Centre Night Patrol, John St, Borroloola 0854	ATSI										•						

This list was finalised between July and October 2004

Northern Territory

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Central Australian Aboriginal Alcohol Programs Unit, 290 Ragonesi Rd, Alice Springs 0872	NGO	•		•	•					•	•		•	•			•
Central Australian Aboriginal Congress Inc (CAAC) Youth Outreach Program, Alice Springs 0871	ATSI										•						•
Council for Aboriginal Alcohol Program Services (CAAPS), Berrimah 0828	NGO					•						•					
Danila Dilba Medical Service, Giving Up the Smokes, 32–34 Knuckey St, Darwin 0801	ATSI												•				
Darwin Correctional Centre, Tivendale Rd, Berrimah 0828	Govt			•		•						•		•			
Darwin Withdrawal Services, Coconut Grove 0810	Govt	•	•		•	•								•	•		•
Drug and Alcohol Services Association, 4 Schwarz Crescent, Alice Springs 0870	Govt	•	•		•						•		•		•		
Employee Assistance Service – Alice Springs, Alice Springs 0870	Private		•		•		•						•				
Employee Assistance Service – Darwin, Darwin 0800	Private		•		•		•						•				
Employee Assistance Service – Jabiru, Jabiru 0866	Private				•												
Employee Assistance Service – Katherine, Randazzo Building, Katherine 0850	Private		•		•		•						•				
Employee Assistance Service – Nhulunbuy, Nhulunbuy 0880	Private				•												
Employee Assistance Service – Tennant Creek, Tennant Creek 0860	Private				•												
Foundation of Rehabilitation with Aboriginal Alcohol-Related Difficulties (FORWAARD), 33 Charles St, Stuart Park 0820	ATSI			•	•	•	•							•	•		•
Galiwinku Community Council Night Patrol, Elcho Island, via Darwin 0800	ATSI										•						

This list was finalised between July and October 2004

Northern Territory

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Gurungu Council Aboriginal Corporation, Night Patrol Lot 21, Elliott North Camp, Elliott 0862	ATSI										•						
Holyoake Alice Springs Inc, 21 Newland St, Alice Springs 0870	NGO			•	•						•		•		•		•
Ilpurla Aboriginal Corporation Substance Abuse Program, Ilpurla Springs, via Alice Springs NT 0872	ATSI												•				•
Imanpa Community, Imanpa Night Patrol, Imanpa Community, via Alice Springs 0872	ATSI										•						
Intjartnama Aboriginal Corp Substance Abuse Rehabilitation and Education Program, Intjartnama, via Hermannsburg 0872	ATSI			•		•											•
Julalikari Council Aboriginal Corporation Night Patrol, 13 Maloney St, Tennant Creek 0860	ATSI										•						
Kalano Aboriginal Alcohol Rehabilitation Program, Katherine 0850	ATSI		•			•	•			•		•				•	•
Kalano Community Association Inc Community Patrol, Kalano Farm, Rockhole, near Katherine 0852	ATSI										•						
Mitwatj Health Aboriginal Corporation Outreach and Referral Service, Arnhem Rd, Nhulunbuy 0880	ATSI																•
Mount Theo-Yuendumu Substance Misuse Aboriginal Corp Youth Diversionary Program, Yuendumu, via Alice Springs 0872	ATSI										•		•				•
Nauiyu Community Night Patrol, Daly River, Winnellie 0821	ATSI										•						
Ngaliwurru-Wuli Aboriginal Resource Centre Night Patrol, Katherine Region 0852	ATSI										•						
Ngkarte Mikwekenhe Community D&A Programs, 40 South Terrace, Alice Springs 0870	ATSI												•		•		
Papunya Community Night Patrol, Papunya Community, via Alice Springs 0872	ATSI										•						
Prison Substance Abuse Education Program, 66 The Esplanade, Darwin 0800	Govt				•		•										

This list was finalised between July and October 2004

Northern Territory

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Salvation Army Bridge Program, Sunrise Centre, Lot 5043 Salonika St, Stuart Park 0820	NGO		•	•	•	•	•		•		•		•				
Tangentyere Council, Night Patrol, 4 Elder St, Alice Springs 0870	ATSI										•						
Titjikala (Tapatjatjaka) Community Night Patrol, Titjikala Community, via Alice Springs 0872	ATSI										•						
Waltja Tjukanku Palyapayi Reconnect Program, 3 Ghan Rd, Alice Springs 0870	ATSI										•		•		•		
Walungurru Community (Kintore) Council Night Patrol, Dry-Out Shelter & Police Program, Kintore, via Alice Springs 0872	ATSI										•						
Watiyawanu (Mount Liebig) Community Night Patrol, Watiyawanu Community, via Papunya 0872	ATSI										•						
Willowra Community Night Patrol, Willowra Community, Yuendumu, via Alice Springs 0872	ATSI										•						
Wugularr Community Night Patrol, Wugularr Community, via Katherine 0852	ATSI										•						
Yirrkala Dhanbul Association Sport and Recreation Program, Yirrkala 0880	ATSI										•						
Yirrkala Sober Women's Group Night Patrol, Yirrkala 0880	ATSI										•						
Yuendumu Women's Centre Aboriginal Corp Women's Night Patrol, Yuendumu, via Alice Springs 0872	ATSI										•						

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Abaleen Detox Services Group Inc, Sandgate Rd, Clayfield 4011	NGO		•		•												
Aboriginal & Islanders Alcohol Relief Service, North Stradbroke Island	ATSI	•			•	•							•				•
Addiction Help Agency, 211 Lyons St, Westcourt 4870	NGO				•	•											
Adolescent D&A Withdrawal Service, 38 Clarence St, South Brisbane 4101	Govt	•															
Alcohol & Drug Foundation Queensland, Level 3, 133 Leichhardt St, Spring Hill 4004	NGO				•												
Alcohol & Drug Foundation Queensland: Logan House Drug Rehab Centre, 75–87 Kirk Rd, Chambers Flat 4114	NGO					•				•							
Alcohol and Drug Assessment Unit, Princess Alexandra Hospital, Ipswich Rd, Woolloongabba 4102	Govt	•												•			
Arthur Gorrie Correctional Centre, 3068 Ipswich Rd, Richlands 4077	Private			•								•				•	
ATODS Bamaga (Cairns ATODS), Primary Health Care Centre, Sagaukaz St, Bamaga 4876	Govt				•												
ATODS Biala Brighton-Chermside Community Team, Hamilton Rd, Chermside 4032	Govt				•												
ATODS Biala Community Team Brisbane, 270 Roma St, Brisbane 4000	Govt	•		•				•				•		•			
ATODS Biala Indigenous Team, 270 Roma St, Brisbane 4000	Govt			•													
ATODS Biala, Indooroopilly Community Team, 2 Finney Rd, Indooroopilly 4068	Govt	•		•						•		•		•			
ATODS Biloela (Gladstone ATODS), Gladstone Rd, Biloela 4715	Govt				•												
ATODS Bundaberg, Bourbong St, Bundaberg 4670	Govt	•		•		•		•						•			

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ATODS Caboolture CHC, McKean St, Caboolture 4510	Govt				•												•
ATODS Cairns Base Hospital Opioid Program, Shield St, Cairns 4870	Govt		•		•				•								
ATODS Charleville, 18 Sills St, Charleville 4470	Govt				•												
ATODS Clermont (Mackay ATODS), 12–14 Nelson St, Clermont 4721	Govt				•												
ATODS Cooktown (Cairns ATODS), Hope St, Cooktown 4871	Govt				•												
ATODS Cunnamulla Hospital, 56 Wicks St, Cunnamulla 4490	Govt	•															
ATODS Edmonton (Cairns ATODS), 10 Robert Rd, Edmonton 4869	Govt			•													
ATODS Emerald CHS (Mackay ATODS), Hospital Rd, Emerald 4720	Govt			•													
ATODS Fraser Coast, 167 Neptune St, Maryborough 4650	Govt	•		•													
ATODS Gayndah (Kingaroy ATODS), 69 Warton St, Gayndah 4625	Govt			•													
ATODS Gladstone, Park St, Gladstone 4680	Govt	•		•													
ATODS Gold Coast, 108 Nerang St, Southport 4215	Govt			•													
ATODS Goodna (West Moreton ATODS), 81 Queen St, Goodna 4300	Govt	•		•		•		•				•					
ATODS Gympie CHC, 20 Alfred St, Gympie 4570	Govt	•		•													
ATODS Hopevale (Cairns ATODS), Thupie St, Hopevale 4871	Govt			•													

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ATODS Inala CHC (Biala ATODS), 64 Wirraway Pde, Inala 4077	Govt		•		•												
ATODS Innisfail (Cairns ATODS), Alice St, Innisfail 4860	Govt				•												
ATODS Ipswich (West Moreton ATODS), Bell St, Ipswich 4305	Govt		•		•		•		•				•				
ATODS Kingaroy, 166 Youngman St, Kingaroy 4610	Govt		•		•								•				
ATODS Kowanyama (Cairns ATODS), Primary Health Clinic, Kowanyama 4871	Govt				•												
ATODS Kuranda (Cairns ATODS), 12 Thongon St, Kuranda 4872	Govt				•												
ATODS Lockhart River (Cairns ATODS), 4 Piramu St, Lockhart River 4871	Govt				•												
ATODS Logan/Beaudesert, Ewing Rd, Loganholme 4129	Govt		•		•				•								
ATODS Longreach (Rockhampton ATODS), Duck St, Longreach 4730	Govt				•												
ATODS Mackay, 12–14 Nelson St, Mackay 4740	Govt		•		•												
ATODS Moranbah (Mackay ATODS), Elliot St cnr Mills Ave, Moranbah 4744	Govt				•												
ATODS Mossman (Cairns ATODS), Hospital St, Mossman 4873	Govt				•												
ATODS Mt Isa, 28 Camooweal St, Mt Isa 4825	Govt				•												
ATODS Murgon (Kingaroy ATODS), Stephens St, Murgon 4605	Govt				•												
ATODS Nanango (Kingaroy ATODS), 135 Brisbane St, Nanango 4615	Govt				•												

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ATODS Northside Clinic (Gold Coast), 108 Nerang St, Southport 4215	Govt				•												
ATODS Rockhampton, 2 East St, Rockhampton 4700	Govt		•		•				•				•				
ATODS Roma, 69 Arthur St, Roma 4455	Govt		•		•												
ATODS Sarina (Mackay ATODS), 1 Hospital St, Sarina 4734	Govt				•												
ATODS Smithfield (Cairns ATODS), 16 Danbulan St, Smithfield 4878	Govt				•												
ATODS Sunshine Coast, Hospital Rd, Nambour 4560	Govt		•		•				•		•		•				
ATODS Thursday Island (Cairns ATODS), PHC Centre, Douglas St, Thursday Island 4875	Govt				•												
ATODS Toowoomba, Pechy St, Toowoomba 4350	Govt		•	•	•				•				•		•		•
ATODS Townsville, 242 Walker St, Townsville 4810	Govt		•				•				•		•				
ATODS Tully (Cairns ATODS), Cook St, Tully 4854	Govt				•												
ATODS Weipa (Cairns ATODS), Cnr Central & Northern Ave, Weipa 4874	Govt				•												
ATODS Whitsunday, 12 Altmann Ave, Cannonvale 4802	Govt				•												
Australian Parents for Drug Free Youth – Drug Stop Maryborough, 17 Panorama Drive Maryborough 4650	NGO		•		•												
Bayside A&D Service, Whites Rd, Lota 4179	Govt		•		•						•						
Belmont Private Hospital, 1220 Creek Rd, Carina 4152	Private	•		•		•		•		•		•		•			

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Borallon Correctional Centre, Ivan Lane, Borallon 4306	Private			•								•		•			
Brisbane Private Hospital – Damascus Unit, 259 Wickham Tce, Brisbane 4000	Private					•											
Brisbane Youth Service, 14 Church St, Fortitude Valley 4006	NGO				•						•		•				
Burdekin Community Association, 130 Queen St, Ayr 4807	NGO				•												
Calvary Careline, 569 Bayswater Rd, Mt Louisa 4814	NGO				•												
Cherbourg Community Health, Barambah Ave, Cherbourg 4605	Govt	•		•								•		•			
Crana House Committee, 85 Alexandra Rd, Ascot 4007	Private					•											
Crossroads Recovery Association Inc, 8 High St, Southport 4215	NGO	•		•								•					
Darling Downs Correctional Centre, Cnr Pittsworth & Althaus Rds, Toowoomba 4350	Govt			•								•					
Douglas House, Aboriginal & Islander Alcohol Relief Service, 198 Grafton St, Cairns 4870	ATSI				•	•											
Drug & Alcohol Counselling Service Southside, 43 Floral St, Mt Gravatt 4122	Private				•												
Drug Arm Brisbane, 24 Hamilton Pl, Bowen Hills 4006	NGO	•		•		•				•		•		•		•	
Drug Arm Bundaberg SOS, 4 Scotton St, Kepnock 4670	NGO									•							
Drug Arm Ipswich & West Moreton SOS, 245 Brisbane St, Ipswich 4305	NGO									•		•					
Drug Arm Toowoomba SOS, 299 Ruthven St, Toowoomba 4350	NGO									•		•					

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Dunes (Drug Users Network Education & Support), 2019 Gold Coast Hwy, Miami 4220	NGO				•						•		•				
Engaging Minds Pty Ltd, 737 Logan Rd, Greenslopes 4120	Private				•						•		•				
Engaging Minds Pty Ltd, 503 Gympie Rd, Strathpine 4500	Private				•						•		•				
Esk Hospital, Highland St, Esk 4312	Govt	•			•												
Family and Kids Foundation Inc, 254 Jacaranda Ave, Kingston 4114	NGO					•											
Ferdie's Haven — Palm Island, Palm Island 4816	ATSI					•											
Fresh Hope Association, 342 Ruthven St, Toowoomba 4350	Private	•				•											
Gay and Lesbian Alcohol and Drug Support Group, 38 Gladstone Rd, Highgate Hill 4101	NGO				•												
Gold Coast AIDS Association, 18a West St, Burleigh Heads	NGO				•								•		•		•
Gold Coast Drug Council Inc, 191 West Burleigh Rd, West Burleigh 4219	NGO		•		•		•				•		•		•		•
Gold Coast Drug Council, Mirikai, 191 West Burleigh Rd, West Burleigh 4219	NGO	•				•				•							
Goldbridge Rehabilitation Services, 16 White St, Southport 4215	NGO				•		•										•
Goori Recovery House, 69 Haggup St, Cleveland 4163	ATSI	•				•											
Gumbi Gumbi — Halo House, 25 George St, Rockhampton 4700	ATSI			•		•		•				•		•			
Holyoake — Queensland Institute on Alcohol & Addictions (ADFQ), 133 Leichhardt St, Spring Hill 4004	NGO				•												

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Hospital A&D Services (HADS), Royal Brisbane Hospital, Butterfield St, Herston 4029	Govt	•															
Innisfail Hospital D&A Services, 87 Rankin St, Innisfail 4860	Govt				•												
Interlock (ADFQ), Level 3, 133 Leichhardt St, Spring Hill 4004	NGO				•												
Interlock (ADFQ), 13 Wallace St, Chermside 4032	NGO				•												
Interlock (ADFQ), 14 South Station Rd, Booval 4304	NGO				•												
Interlock (ADFQ), 1st Floor, 519 Kessels Rd, Macgregor 4019	NGO				•												
Interlock (ADFQ) Moreton Centre, 5 Violet St, Redcliffe 4020	NGO				•												
Interlock (ADFQ), Unit 4a, 199 Gympie Rd, Strathpine 4500	NGO				•												
Interlock (ADFQ,) 50 Sumners Rd, Sumner Park 4074	NGO				•												
Interlock (ADFQ), Suite 7, Grenadier House, 260 Morayfield Rd, Morayfield 4506	NGO				•												
Interlock (ADFQ), Crangold Business Centre, 23–129a Lake St, Cairns 4810	NGO				•												
Interlock (ADFQ), 1st Floor, 92 Victoria St, Mackay 4740	NGO				•												
Interlock (ADFQ), 2nd Floor, 167 Denham St, Townsville 4810	NGO				•												
Jesse Budby Healing Centre, 27 Llewellyn St, New Farm 4005	ATSI					•						•	•	•			
Kalkadoon Aboriginal Sobriety House (KASH), Barkly Hwy, Mt Isa 4825	ATSI	•				•											

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Krurungal A&TSI Corporation for Welfare, Resource & Housing, 87 Griffith St, Coolangatta 4225	ATSI				•												
Lotus Glen Correctional Centre, Chettle Rd, Mareeba 4880	Govt	•		•													
Mackay Hospital Special Services Program, 475 Bridge St, Mackay 4740	Govt				•				•								
Management of Public Intoxication Program Rockhampton, 6 East St, Rockhampton 4700	NGO				•												
Maroochydore CHC A&D Service, Cnr Hinkler Pde & Kippara La, Maroochydore 4558	Govt				•												
Mater Mothers Hospital Antenatal Clinic, Raymond Tce, South Brisbane 4101	NGO	•		•	•	•											
Mater Mothers Hospital Champ Clinic, Raymond Tce, South Brisbane 4101	NGO				•												
Melaluca Clinic, Prince Charles Hospital, 627 Rode Rd, Chermside 4032	Govt				•				•								
MICAH Projects Inc, 20 Merivale St, South Brisbane 4101	NGO				•								•				
Mission Australia Townsville, 258 Ross River Rd, Aitkenvale 4814	NGO			•		•											
Mothers Against Drugs Association Inc, 98 Milne St, Beenleigh 4207	NGO		•		•												
Nambour Hospital Special Health Services, Hospital Rd, Nambour 4560	Govt				•				•								
New Life Ministry at Street Level Inc, Cnr Esther Pl & Bundall Rd, Surfers Paradise 4217	NGO				•												
Newlife Care, Bundall Rd, Bundall 4217	NGO		•		•												
Ozcare Cairns Integrated Drug Treatment Service (IDTS), 197 Draper St, Cairns 4870	NGO	•															

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Ozcare D&A Rehabilitation Centre Raceview, 1 Warner St, Raceview 4305	NGO		•														
Ozcare D&A The Haven Coorparoo, 75 Shakespeare St, Coorparoo 4151	NGO		•														
Ozcare Illicit Drug Service South Brisbane, 48 Peel St, South Brisbane 4101	NGO	•			•										•		
Ozcare Lucinda House, 60 Lucinda St, Taringa 4068	NGO					•											
Ozcare Mackay Residential D&A Treatment Service, 1 Endeavour St, Mackay 4740	NGO	•				•		•		•		•					
Ozcare Townsville Residential D&A Treatment Service, 47–49 Palmer St, Townsville 4810	NGO	•				•											
Palm Beach – Currumbin Clinic, 37 Bilinga St, Currumbin 4223	Private	•				•											
Peel Street Clinic, 66 Peel St, South Brisbane 4101	Govt			•				•									
Prince Charles Hospital District A&D Service, Hamilton Rd, Chermside 4032	Govt		•	•								•			•		
Psychology & Social Work Private Practice, 45 Woongarra St, Bundaberg 4670	Private			•						•							
QIDDI Outreach Service, Augathella District Hospital, Cavanagh St, Augathella 4477	NGO			•								•			•		
QIDDI Outreach Service, Cunnamulla Aboriginal Corporation For Health, 26–28 John St, Cunnamulla 4490	NGO			•								•			•		
QIDDI Outreach Service, Inglewood Shire Council, Cnr Elizabeth & Albert Sts, Inglewood 4387	NGO			•								•			•		
QIDDI Outreach Service, Mitchell Health Service, Mitchell Hospital, Anne St, Mitchell 4465	NGO			•								•			•		
QIDDI Outreach Service, Morven Clinic, Warrego Highway, Morven 4468	NGO			•								•			•		

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
QIDDI Outreach Service, Quilpie Neighbourhood Care Association, 47 Brolga St, Quilpie 4480	NGO				•								•		•		
QIDDI Outreach Service, Care Balonne, 21–23 Beardmore Place, St George 4487	NGO				•								•		•		
QIDDI Outreach Service, Tambo Primary Health Centre, 4–8 Garden St, Tambo 4478	NGO				•								•		•		
QIDDI Outreach Service, Frontier Services Centre, 40 Stansfield St, Hughenden 4821	NGO				•								•		•		
QIDDI Outreach Service, Registrars Room, Government Agency, 51 Goldring St, Richmond 4822	NGO				•								•		•		
QIDDI Outreach Service, Police Station, 6 Matthew St, Julia Creek 4823	NGO				•								•		•		
QIDDI Outreach Service, Gidgee Inn, Matilda Highway, Cloncurry 4824	NGO				•								•		•		
QIDDI Outreach Service, Police Station, Gregory St, Burketown 4830	NGO				•								•		•		
QIDDI Outreach Service, Normanton Hospital, Brown St, Normanton 4890	NGO				•								•		•		
QIDDI Outreach Service, Croydon Hospital, Sircon St, Croydon 4871	NGO				•								•		•		
QIDDI Outreach Service, Latara Resort Motel, Gulf Development Rd, Georgetown 4871	NGO				•								•		•		
QIDDI Outreach Service, Joint Emergency Services Building, Redbank Drive, Greenvale 4816	NGO				•								•		•		
QIDDI Outreach Service, Police Station, Mornington Island	NGO				•								•		•		
QIDDI Outreach Service, Chinchilla District Health Service, Slessar St, Chinchilla 4413	NGO				•								•		•		
QIDDI Outreach Service, Charleville & District Community Support Assoc, Cnr Alfred & Eyre Sts, Charleville 4470	NGO				•								•		•		

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
QIDDI Outreach Service Care, Goondiwindi, Community Services Information Ctr, 52 Marshall St, Goondiwindi 4390	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Community Development Association, Mansfield Walk, Beenleigh 4207	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Suite 7, Grenadier House, 260 Morayfield Rd, Morayfield 4207	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Capalaba Community Centre, 29 Loraine St, Capalaba 4157	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Hervey Bay Neighbourhood Centre, 57 Taylor St, Hervey Bay	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Inala Community Health Service, 64 Wirraway Parade, Inala 4077	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Booval Community Service, 14 South Station Rd, Booval 4304	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Multilink Community Services, 38 Blackwood Rd, Woodridge 4114	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Unit 4, Riverside Enterprise Centre, 9a–11 Quay St, Bundaberg 4670	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 51 Cunningham St, Dalby 4405	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 123 Gympie St, Gympie 4570	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Suite 6, 19a Mail St, Pialba 4655	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 303 Kent St, Maryborough 4650	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 115 Nichols Rd, Yandina 4561	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 5 Kerada St, Nambour 4560	NGO				•								•		•		

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
QIDDI Queensland Illicit Drug Diversion Strategy, Roma Bungil Recreation Centre, George St, Roma 4455	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, James Neil Medical Centre, Cnr James & Neil St, Toowoomba 4350	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 13 Isabel St, Toowoomba 4350	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, 148 Palmerin St, Warwick 4370	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Unit 6, 1st Floor, 39 Eyre St, Townsville 4810	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Bowen Neighbourhood Centre, 20 William St, Bowen 4805	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Neighbourhood Centre, 183 Mossman St, Charters Towers 4820	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Hunchbrook Community Centre, 71 Townsville Rd, Ingham 4850	NGO				•								•		•		
QIDDI Queensland Illicit Drug Diversion Strategy, Mt Isa Neighbourhood Centre, 14a Hilary St, Mt Isa 4825	NGO				•								•		•		
Queensland Association of School Awareness Inc, 867 Main St, Woolloongabba 4102	NGO				•								•				•
Queensland ATSI Alcoholic Services, 27 Llewellyn St, New Farm 4005	ATSI									•							
QuIVAA (Queensland Intravenous AIDS Association Inc) 185–191 Brunswick St, Fortitude Valley 4006	NGO		•		•								•				
Redcliffe Health Campus A&D Service, 181 Anzac Ave, Redcliffe 4020	Govt				•								•		•		
Redland Health Service Centre A&D Service, Weippin St, Cleveland 4163	Govt				•								•		•		
Rockhampton Correctional Centre Bruce Hwy, Etna Creek, Rockhampton 4700	Govt			•		•											

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Roma Street Clinic, Biala, 270 Roma St, Brisbane 4000	Govt				•				•								
Rose Colless Haven, Aboriginal & Islanders Alcohol Relief Service, Shanty Creek Rd, Emerald Creek	ATSI					•			•								
Salvation Army Fairhaven Recovery Centre, Lot 497, Parklands Drive Southport 4215	NGO					•											
Salvation Army Mancare RSC Townsville, 314 Walker St, Townsville 4810	NGO	•		•		•											
Salvation Army Moonyah Rehabilitation Centre, 58 Glenrosa Rd, Red Hill 4059	NGO			•		•						•					
Salvation Army Recovery Service Brisbane, 58 Glenrosa Rd, Red Hill 4059	NGO	•															
Salvation Army Recovery Service Townsville, 312–340 Walker St, Townsville 4810	NGO			•		•						•		•		•	
Salvation Army Youth Outreach Service, 75 King St, Fortitude Valley 4006	NGO			•								•					
Salvation Army Youth Outreach Service, Lawnton Pocket Rd, Lawnton 4501	NGO			•								•					
Salvation Army Youth Outreach Service, 75 King St, Caboolture 4510	NGO			•													
SCIVAA, 59 Sixth Ave, Cotton Tree 4558	NGO	•		•								•		•			
Smith, Fay, Addiction therapy, 286 Bourbong St, Bundaberg 4670	Private			•													
Southside Clinic, Gold Coast, 2019 Gold Coast Hwy, Miami 4220	Govt			•				•									
St Andrew's Hospital, 457 Wickham Tce, Brisbane 4000	Private	•		•		•											
St Luke's Nursing Service – Amend Program, 138 Juliet St, Greenslopes 4120	NGO	•		•		•	•			•		•		•			

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Stagpole Street Centre, Palm Island A&D Rehab Corp, 9 Stagpole St, West End 4810	ATSI				•	•											
Sunshine Coast Private Hospital, Sydlingard Drive, Buderim 4556	Private	•				•											
Tablelands A&D Service (TADS) Atherton, 42–44 Mains St, Atherton 4883	NGO				•												
Tablelands A&D Service (TADS) Ravenshoe, Ravenshoe 4872	NGO				•												
Tarampa Aftercare Centre, Lowood-Minden Rd, Minden 4311	Private					•											
Teen Challenge New Life Centre, Bedford St, Willowburn 4350	NGO			•		•											
The Lodge Youth Support, 106 Peary St, Northgate 4013	NGO					•	•				•						
Toowong Private Hospital, 496 Milton Rd, Auchenflower 4066	Private	•				•											
Townsville Aboriginal & Islanders Health Services, 57–59 Gorden St, Garbutt 4814	ATSI			•													
Townsville Correctional Centre, 4 Dwyer St, Stuart 4811	Govt	•				•											
Whitsunday Community Health Centre, 12 Altmann Ave, Cannonvale 4802	Govt		•						•						•		
Woodford Corrective Services, Neurum Rd, Woodford 4514	Govt	•		•		•		•				•		•			
WuChopperen Atherton, 42–44 Mains St, Atherton 4883	ATSI				•												
WuChopperen Mareeba, Lloyd St, Mareeba 4880	ATSI				•												
WuChopperen Health Service, 13 Moignard St, Manoora 4870	ATSI	•	•	•	•	•	•		•	•	•	•	•	•	•		

This list was finalised between July and October 2004

Queensland

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Wulngah Wulngah, Mamu Medical Service, 10 Ernest St, Innisfail 4860	ATSI	•			•								•				
Wunjuada Aboriginal Corporation For Alcohol & Drug Dependence, Barambah Ave, Cherbourg 4605	ATSI			•		•											
Yaamba ATSI Corporation for Men, 141 Palm Springs Drive, Bundaberg 4670	ATSI					•											
Yarrabah Substance Abuse Service, Back Beach Rd, Yarrabah 4871	ATSI				•	•											
Youth and Family Services Logan/Beaudesert, 2 Rowan St, Slacks Creek 4133	NGO				•												
Youth Community Team A&D Service, 776 Zillmere Rd, Aspley 4034	Govt			•													
Youth Empowered Towards Independence (YETI) Cairns, 258 Drapers St, Cairns 4870	NGO	•		•						•		•		•		•	

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Aboriginal Drug & Alcohol Council (SA) Inc (ADAC), 53 King William St, Kent Town 5067	ATSI												•				
Aboriginal Sobriety Group of SA – Annie Koomatrie House – Women, 7 Palmyra Ave, Torrensville 5031	ATSI			•						•		•					
Aboriginal Sobriety Group of SA – Cyril Lindsay House – Men, 307 South Terrace, Adelaide 5000	ATSI				•										•		•
Aboriginal Sobriety Group of SA – Laklinjeri Tumbetin Waal Healing Centre, Frahns Farm Rd, Monarto	ATSI			•						•		•					
Aboriginal Sobriety Group of SA – Mobile Assistance Patrol, 182–190 Wakefield St, Adelaide 5000	ATSI			•		•						•					
Aboriginal Sobriety Group of SA – Assessment, Referral & Counselling Service, 182–190 Wakefield St, Adelaide 5000	ATSI									•							
ADAC Drug Diversions, 53 King William St, Kent Town 5067	ATSI									•		•		•			
ADAC Makin Tracks, 53 King William St, Kent Town 5067	ATSI											•					•
ADAC Mentor Project, 124 Adelaide Rd, Murray Bridge 5253	ATSI									•		•					
Adelaide Day Centre for Homeless Persons, 32 Moore St, Adelaide 5000	NGO					•				•		•		•			
Archway Rehabilitation Program, Anglicare SA, 74 Dale St, Port Adelaide 5015	NGO					•				•		•		•			
Baptist Community Services (SA) Adventure Services, 216 Wright St, Adelaide 5000	NGO				•							•					
Baptist Community Services (SA) D&A Service, 216 Wright St, Adelaide 5000	NGO				•					•		•		•			
Byron Place Community Centre, UnitingCare Wesley Adelaide, 61–67 Byron Place, Adelaide 5000	NGO				•					•		•		•			
Ceduna Hospital Inc Ceduna Sobering-up Service, Eyre Highway, Ceduna 5690	Govt	•		•													

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Ceduna/Koonibba Aboriginal Health Services, 60 Poynton St, Ceduna 5690	ATSI			•	•					•	•		•		•		
Ceduna/Koonibba Aboriginal Health Services Mobile Assistance Program, 60 Poynton St, Ceduna 5690	ATSI				•										•		
DASC Alcohol & Drug Information Service (ADIS), 90–92 Fourth Ave, Joslin 5070	Govt				•								•				
DASC Alcohol Unit, Outpatient Services, 90–92 Fourth Ave, Joslin 5070	Govt		•												•		
DASC Community Services, Central North – Northern, 22 Langford Drive, Elizabeth 5112	Govt				•		•						•		•		
DASC Community Services, Central North – Northern, Cnr Haydown & Oldham Rds, Elizabeth Vale 5113	Govt			•								•		•			
DASC Community Services, South West – Marion, 1 Crystal Ave, St Marys 5042	Govt			•								•		•			
DASC Community Services, South West – Noarlunga, Alexander Kelly Drive, Noarlunga Centre 5168	Govt			•								•		•			
DASC Community Services, South West – Southern, 82 Beach Rd, Christies Beach 5165	Govt			•				•				•		•			
DASC Community Services, South West – The Parks, Trafford St, Angle Park 5010	Govt			•								•		•			
DASC Community Services, South West – Western, 2–46 Cowan St, Angle Park 5010	Govt			•								•		•			
DASC Community Services, South West – Port Adelaide, Cnr Church & Dale Sts, Port Adelaide 5015	Govt			•								•		•			
DASC Community Services, Central North – Bura, 74 Hill St, North Adelaide 5006	Govt			•								•		•			
DASC Community Services, Central North – Elizabeth, Elizabeth 5112	Govt			•				•				•					
DASC Country Community Services, Adelaide Hills CHC, Mount Barker, Wellington Rd, Mt Barker 5251	Govt			•						•		•		•			

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
DASC Country Community Services, Barossa – Gawler, 21 Hutchinson Rd, Gawler 5118	Govt				•						•		•		•		
DASC Country Community Services, Barossa – Angaston, 29 North St, Angaston 5353	Govt				•						•		•		•		
DASC Country Community Services, Clare D&A Service, Webb St, Clare 5453	Govt				•						•		•		•		
DASC Country Community Services, Mt Gambier CHC, Wehl St, Mt Gambier 5290	Govt				•						•		•		•		
DASC Country Community Services, Murray Bridge CHC, Swanport Rd, Murray Bridge 5253	Govt				•						•		•		•		
DASC Country Community Services, Naracoorte CHC, Cedar Ave, Naracoorte 5271	Govt			•						•		•		•			
DASC Country Community Services, Northern Yorke Peninsula HS, Ernest Tce, Wallaroo 5556	Govt			•						•		•		•			
DASC Country Community Services, Port Augusta CHC, Flinders Tce, Port Augusta 5700	Govt			•						•		•		•			
DASC Country Community Services, Port Lincoln Health & Hospital Service, Oxford Tce, Port Lincoln 5606	Govt			•						•		•		•			
DASC Country Community Services, Port Pirie RHS, Alexander St, Port Pirie 5540	Govt			•						•		•		•			
DASC Country Community Services, Riverland CHS, Cornwall St, Berri 5343	Govt			•						•		•		•			
DASC Country Community Services, Southern Fleurieu CHS, Victor Harbor 5211	Govt			•						•		•		•			
DASC Country Community Services, Waikerie Hospital & Health Services, Lawrie Tce, Waikerie 5330	Govt			•						•		•		•			
DASC Country Community Services, Whyalla CHC, Whyalla 5600	Govt			•						•		•		•			
DASC D&A Resources Unit, Royal Adelaide Hospital, North Terrace, Adelaide 5000	Govt	•		•		•		•				•		•			

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
DASC Driver Assessment Clinic, 74 Hill St, North Adelaide 5006	Govt														•		
DASC Harm Reduction Unit, 161 Greenhill Rd, Parkside 5063	Govt												•				
DASC Pharmacotherapies Research Unit, Obstetric Unit, 92 Osmond Terrace, Norwood 5067	Govt										•				•		
DASC Pharmacotherapies Research Unit, Warinilla Clinic, Norwood 5067	Govt										•				•		
DASC Pharmacotherapies Southern Service, Christies Beach 5165	Govt				•				•				•				
DASC Pharmacotherapies Western Service – The Parks CHS D&A Program, 2–46 Cowan St, Angle Park 5010	Govt				•				•				•				
DASC The Woolshed, Strathalbyn Rd, Ashbourne 5157	Govt	•		•								•					
DASC Withdrawal Services Alcohol Unit, 90–92 Fourth Ave, Joslin 5070	Govt	•			•												
DASC Withdrawal Services Warinilla Clinic, 92 Osmond Terrace, Norwood 5067	Govt	•			•								•		•		
DASC Community Services, Central North – Enfield, 221–3 Main North Rd, Sefton Park 5083	Govt												•		•		
Drug Arm Northern St Outreach Service (SOS), 523 Main North Rd, Elizabeth 5112	NGO										•		•				
Drug Arm Southern St Outreach Service (SOS), 7 Partridge St, Glenelg 5158	NGO										•		•				
Drug Arm Tee Tree Gully St Outreach Service (SOS), 182 Hancock Rd, Ridgehaven 5097	NGO										•		•				
DrugBeat of SA, Australian Drug Treatment & Rehabilitation Program, 118 Sampson Rd, Elizabeth Grove 5112	NGO		•		•		•				•		•		•		
Dunjiba Community Council Youth Substance Abuse Program, Ikatunka Terrace, Oodnadatta 5734	ATSI												•				

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Kahlin Day Centre, Adelaide Clinic, 40 Briant Rd, Magill 5072	Private		•		•		•				•		•				
Kahlyn Private Hospital, 40 Briant Rd, Magill 5072	Private					•											
Kainggi Yuntuwarren Riverland Aboriginal Alcohol Program, 3 Wilson St, Berri 5343	ATSI				•		•						•				
Kalparrin Inc Barrie Wiegold Substance Abuse Rehabilitation Centre, Karoonda Rd, Murray Bridge 5253	ATSI	•		•						•		•		•			
Kalparrin Inc Mobile Assistance Program, Rocky Galey Rd, Murray Bridge 5253	ATSI										•						
Kuitpo Community, Uniting Care Wesley, RSD1515 Blackfellows Creek Rd, Hope Forest via Willunga 5172	NGO		•							•		•		•			
Marion Youth Centre, 249 Diagonal Rd, Warradale 5046	Govt				•								•				
Ngaanyatjarra Pitjantjara Yankunytjatjara Women's Council – Young Peoples Project, Stuart Hwy, Indulkana 0872	ATSI												•				•
Nganampa Health Council Solvent Abuse Prevention Service, Amata Community, via Alice Springs 0872	ATSI												•				•
Nunkuwarrin Yunti of SA U-HIT Aboriginal Needle Exchange Program, 182–190 Wakefield St, Adelaide 5000	ATSI				•						•		•		•		
Offenders Aid & Rehabilitation Services SA – Drug and Alcohol Counselling Service, 231 Morphett St, Adelaide 5000	NGO				•						•		•		•		
Pika Wiya Health Services Youth Program, 40 Dartmouth St, Port Augusta 5700	ATSI				•						•		•		•		•
Port Augusta Substance Misuse Services, 20 Jervois St, Port Augusta 5700	Govt		•		•						•		•		•		•
Port Lincoln AHS Substance Misuse Awareness Program, 19a Oxford Tce, Port Lincoln 5606	ATSI				•						•		•		•		
SA Forensic Health Service – James Nash House, 140 Hill Top Drive, Oakden 5068	Govt								•		•		•		•		

This list was finalised between July and October 2004

South Australia

		Detoxification R	Detoxification N	Counselling R	Counslingel N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Second Story City, 57 Hyde St, Adelaide 5000	Govt				•				•		•		•		•		
Second Story North, 6 Gillingham Rd, Elizabeth 5112	Govt				•												
Second Story South, 50A Beach Rd, Christies Beach 5165	Govt				•												
South East D&A Counselling Service Bordertown, 8 DeCourcey St, Bordertown 5268	Private				•								•				
South East D&A Counselling Service Millicent, Mt Gambier Rd, Millicent 5280	Private				•								•				
South East D&A Counselling Service Mt Gambier, Wehl St North, Mt Gambier 5290	Private				•								•				
Umoona Community Council Substance Abuse Program, Coober Pedy 5723	ATSI	•		•		•				•		•		•			
Uniting Care Wesley – Adelaide, 10 Pitt St, Adelaide 5000	NGO				•					•		•		•			
Uniting Care Wesley – Bowden, 77 Gibson St, Bowden 5007	NGO				•					•		•		•			
Uniting Care Wesley – Port Adelaide, 70 Dale St, Port Adelaide 5015	NGO				•					•		•		•			
Uniting Care Wesley – Port Pirie, 60 Florence St, Port Pirie 5540	NGO				•					•		•		•			
Women's Health Statewide, 64 Pennington Tce, North Adelaide 5006	Govt				•					•		•					
Yalata/Maralinga Health Service, Yalata Community, via Ceduna 5690	ATSI			•	•					•							

This list was finalised between July and October 2004

Tasmania

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ADS North West Burnie, 11 Jones St, Burnie 7320	Govt		•		•				•		•				•		
ADS North West Devonport, 81a Gunn St, Devonport 7310	Govt		•		•				•		•				•		•
ADS North West King Island, Currie, King Island 7256	Govt		•		•				•		•				•		•
ADS North West Queenstown, McNamara St, Queenstown 7467	Govt		•		•				•		•				•		•
ADS North West Rosebery, Hospital Rd, Rosebery 7470	Govt		•		•				•		•				•		•
ADS North West Smithton, Brittons Rd, Smithton 7330	Govt		•		•				•		•				•		•
ADS North West Ulverstone, 11 Grove St, Ulverstone 7315	Govt		•		•				•		•				•		•
ADS North West Wynyard, 39 Hogg St, Wynyard 7325	Govt		•		•				•		•				•		•
ADS North West Zeehan, Main St, Zeehan 7469	Govt		•		•				•		•				•		•
ADS North Launceston, 13 Mulgrave St, Launceston 7250	Govt	•	•	•	•		•		•		•				•		•
ADS South Clarence, Bayfield St, Bellerive 7018	Govt				•				•		•				•		
ADS South Bridgewater/Brighton, 27 Green Point Rd, Brighton 7030	Govt				•				•		•				•		
ADS South Hobart, St Johns Ave, New Town 7008	Govt				•				•		•				•		
ADS South Huon Valley, 5 Sale St, Huonville 7109	Govt				•				•		•				•		
ADS South Kingston, 29 John St, Kingston 7050	Govt				•				•		•				•		

This list was finalised between July and October 2004

Tasmania

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ADS South New Norfolk, Richmond St, New Norfolk 7140	Govt				•				•		•				•		
ADS South New Town, St Johns Ave, New Town 7008	Govt				•		•		•		•				•		
ADS South Sorell, 5 Cole St, Sorell 7172	Govt				•				•		•				•		
ADS South Tasman Peninsula, Main Rd, Nubeena 7184	Govt				•				•		•				•		
ADS South Triabunna, The Esplanade, Triabunna 7190	Govt				•				•		•				•		
Anglicare A&D Services, 2 Terry St, Glenorchy 7010	NGO				•										•		•
Burnie Sobering Up Unit, City Mission, 354 Bass Hwy, Sulphur Creek 7316	NGO			•						•				•			
Burnie Youth A&D Service, 2 Spring St, Burnie 7320	NGO				•												•
Drug Education Network Hobart, 2 Midwood St, New Town 7008	NGO												•				•
Drug Education Network Launceston, 34 Paterson St, Launceston 7250	NGO												•				•
Drug Education Network, Wynyard, 33 Goldie St, Wynyard 7325	NGO				•						•		•				•
Hobart Clinic, 31 Chipmans Rd, Rokeby 7019	Private		•	•	•		•	•							•		
Holyoake, 127 Davey St, Hobart 7000	NGO				•						•		•		•		
Intervention Unit (Detox), 56 Collins St, Hobart 7000	Govt	•		•							•	•					•
Launceston City Mission, Missiondale Recovery Centre, 75 Leylands Rd, Evandale 7212	NGO					•						•		•			

This list was finalised between July and October 2004

Tasmania

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Link Youth Health Service, 57 Liverpool St, Hobart 7000	NGO				•						•				•		•
Pulse Youth Health Centre, Cr Brisbane & Wellington Sts, Hobart 7000	NGO				•						•		•		•		
Risdon Prison, East Derwent Hwy, Risdon 7016	Govt			•								•		•			
Salvation Army Bridge Program Hobart Rehabilitation Unit, Creek Rd, New Town 7008	NGO	•		•		•				•				•	•		
Youth and Family Focus, Devonport, 81 Oldaker St, Devonport 7310	NGO		•		•						•		•		•		•

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ACCESS Clinic, Birralee Maternity Service, Upton House, 131 Thanes St, Box Hill 3128	Govt		•		•						•		•				
ACCESS D&A Service, Community home-based withdrawal, Upton House, 131 Thanes St, Box Hill 3128	Govt		•		•						•		•		•		
ACCESS D&A Service, Mobile Overdose Response Service, Upton House, 131 Thanes St, Box Hill 3128	Govt		•														
ACCESS D&A Service, Wellington House 31–3 Wellington Rd, Box Hill 3128	Govt	•			•												
ACCESS Health – Primary Health Care for Street-Based Drug Users, 31 Grey St, St Kilda 3182	NGO				•						•		•		•		
Albert Rd Clinic Addiction Day Program, 31 Albert Rd, Melbourne 3000	Private	•		•	•		•	•			•				•		
Alcohol Drugs & Pregnancy Team (ADAPT), Monash Medical Centre, 246 Clayton Rd, Clayton 3168	Govt				•				•						•		
Alliance Family Counselling, Uniting Care Connections, 56 Robinson St, Dandenong 3175	NGO				•								•		•		
Anglicare AGEnDAS, Bayswater, 1666 Mountain Hwy, Bayswater 3153	NGO				•								•		•		
Anglicare AGEnDAS, Knox, 1st Floor, 666 Mountain Hwy, Knox 3152	NGO				•						•		•		•		
Anglicare Family Services Werribee, 2 Market Rd, Werribee 3030	NGO		•								•		•				
Anglicare, Intensive Youth Support Service Glenroy, 32a Widford St, Glenroy 3046	NGO		•								•		•				
Anglicare, Intensive Youth Support Service Preston, 239 Murray Rd, Preston 3072	NGO		•								•		•				
Angliss Maternity D&A Service, The Angliss Hospital, Albert St, Ferntree Gully 3156	Govt				•						•				•		
ARC House, 316–322 Kingston Rd, Heatherton 3202	NGO			•		•		•									

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Austin & Repatriation Medical Centre, Studley Rd, Heidelberg 3084	Govt				•				•		•		•				
Australian Community Support Organisation, 4/355 Spencer St, West Melbourne 3003	NGO										•				•		
Australian Vietnamese Women's Welfare Association, 30–32 Lennox St, Richmond 3121	NGO				•						•		•				
Bacchus Marsh Hospital, Djerriwarrh Health Service, Grand St, Bacchus Marsh 3340	Govt	•															
Ballarat and District Aboriginal Co-operative Ltd, 5 Market St, Ballarat 3350	ATSI				•						•		•		•		
Ballarat CHC, 710 Sturt St, Ballarat 3354	Govt		•		•		•				•		•		•		
Ballarat Uniting Care Outreach Centre, 105 Dana St, Ballarat 3350	NGO	•															
Barkly St Medical Centre, 60 Barkly St, St Kilda 3182	Private		•						•				•		•		
Barwon Health Drug Treatment Services, 228 Pakington St, Geelong 3218	Govt		•		•						•		•		•		
Barwon South West Youth Alliance, PO Box 752, Geelong 3220	NGO	•	•		•			•	•		•		•		•		
Bass Coast CHC, 108–110 Watt St, Wonthaggi 3995	Govt	•		•		•					•		•		•		
Baysa Youth Services, 12–14 Halstead Place, Geelong West 3218	NGO				•		•				•		•		•		•
Beleura Clinic, Cnr Stumpy Gully & Bungower Rds, Moorooduc 3933	Private	•	•		•	•	•						•		•		
Bendigo and District Aboriginal Cooperative, 13–15 Forrest St, Bendigo 3550	ATSI				•						•		•		•		
Bendigo CHS – counselling, 13–25 Helm St, Kangaroo Flat 3556	Govt				•		•				•		•				

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Bendigo CHS – treatment, 13–25 Helm St, Kangaroo Flat 3556	Govt		•		•		•	•			•						
Berry St Family Services, 54 Princess Hwy, Dandenong 3175	Govt				•						•		•		•		
Buoyancy Foundation, 293 Punt Rd, Richmond 3121	NGO		•		•		•						•		•		•
Care Ring, West Melbourne 3051	NGO				•												•
Castlemaine CHC, 13 Mostyn St, Castlemaine 3450	Govt		•		•		•						•		•		
Central Bayside CHC, 335 Nepean Hwy, Parkdale 3195	Govt		•		•				•				•		•		
Central Gippsland Aboriginal Cooperative, 8–9 Buckley St Mall, Morwell 3840	ATSI				•		•				•		•		•	•	
Chemical Dependency Unit, Frankston Hospital, 12–32 Hastings Rd Frankston 3199	Govt				•				•						•		
Chemical Dependency Unit, Geelong Hospital, Ryrie St, Geelong, 3220	Govt				•			•	•				•		•		
Clockwork Young People's Health Service, Cnr Gheringhap and Little Mallop Sts, Geelong, 3220	NGO										•		•		•		
Cobaw CHS, High St, Kyneton 3444	Govt		•		•						•		•				
Colac CHC, 2 Connor St, Colac 3250	Govt	•	•		•		•		•		•				•		
Connexions, Jesuit Social Services, 1 Langridge St, Collingwood 3066	NGO				•	•	•			•	•				•		
CrossRds Lodge, Kardinia Christian Fellowship, 2 Colville Crt, Herne Hill 3218	NGO			•		•	•	•		•	•				•		
Custodial Health and A&D Nurses Project (CHAD), Victoria Police, 637 Flinders St, Melbourne 3005	Govt		•												•		

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Dandenong Catholic Deanery, Cyrene Centre, 5/49–52 Douglas St, Noble Park 3174	NGO				•						•		•		•		
Dandenong Hospital D&A Liaison Service, 86 Forster St, Dandenong 3175	Govt									•	•				•		•
DASWEST SUMITT (Substance Use in Mental Illness Treatment Team), 3–7 Eleanor St, Footscray 3011	Govt				•		•		•		•		•		•		
DASWEST Community Residential Withdrawal Unit, 3–7 Eleanor St Footscray 3011	Govt	•		•	•			•			•		•		•		
DASWEST Women's and Children's Program, 149 Durham Rd, Sunshine 3020	Govt			•		•		•		•			•				
DASWEST Youth Outpatient, 49 Nicholson St, Footscray 3011	Govt		•		•		•		•		•		•				
Delhuntie Park Youth Care Centre, Cemetery Rd, Trafalgar East 3824	NGO				•	•	•	•	•			•	•	•	•		
Delmont Private Hospital, 398 Warrigal Rd, Glen Iris 3146	Private	•		•	•	•	•	•	•			•	•	•	•		
DirectLine, Collingwood 3066	NGO				•												•
Drug Arm Victoria, Bendigo, 24 View St, Bendigo 3550	NGO										•		•				•
Drug Arm Victoria, Dandenong, 9 Mason St, Dandenong 3175	NGO										•		•				•
East Gippsland Aboriginal Coop, Jumburra Alcohol Rehabilitation Service, 124 Princes Hwy, Bairnsdale 3875	ATSI			•	•	•	•			•	•	•	•		•		
Echuca Regional Health, 14 Francis St, Echuca 3564	Govt		•		•				•		•				•		
EDAS Boroondara CHS, 378 Burwood Rd, Hawthorn 3122	Govt				•								•		•		
EDAS Eastern Access CHC, Ringwood, 46 Warrandyte Rd, Ringwood 3134	Govt				•		•		•		•		•		•		

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
EDAS Manningham CHS, 1/10–20 Doncaster Rd, Doncaster East 3109	Govt				•				•		•		•		•		
EDAS Maroondah, 28 Warrandyte Rd, Ringwood 3134	Govt				•								•		•		
EDAS Monashlink, 7 Dunscombe Ave, Glen Waverley 3150	Govt				•								•		•		
EDAS Whitehorse, 75 Patterson St, Ringwood East 3134	Govt				•				•				•		•		
EDAS Youth Services, Knox, 509 Burwood Hwy, Wantirna South 3152	Govt				•								•		•		•
Emergency Accommodation & Support Enterprise (EASE), 18 Forest St, Bendigo 3550	Govt					•				•	•	•	•				
Family Drug Help, 1242 Glenhuntly Rd, Glenhuntly 3163	NGO												•				
First Step Program, 42 Carlisle St, St Kilda 3182	NGO	•		•		•		•									
Flat Out Inc, North Yarra CHC, 365 Hoddle St, Collingwood 3066	NGO										•		•		•		
Foot Patrol, set route patrols in CBD, Melbourne 3000	NGO										•						•
Frankston CHS, 8–10 Hastings Rd, Frankston 3199	Govt	•		•		•					•						•
Frankston CHS Koori Community A&D Service, 9–10 Hastings Rd, Frankston 3199	Govt				•												
Gateway Counselling Centre Inc, 173 Balaclava Rd, Caulfield North 3161	NGO				•		•				•		•		•		
Genesis Medical Centre, 390 Bay St, Brighton North 3186	Private	•		•		•		•									
Gippsland & East Gippsland Aboriginal Coop Jumburra Alcohol Rehab Service, 124 Princess Hwy, Bairnsdale 3875	ATSI				•	•						•	•				

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Gippsland & East Gippsland Aboriginal Coop Medical Centre 37 Dalmahoy St, Bairnsdale 3875	ATSI		•		•												
Gippsland & East Gippsland Aboriginal Coop Tanderra Sobering Up Centre 372 Main St, Bairnsdale 3875	ATSI										•		•	•			
Gippsland Southern Health Service, Koonwarra Rd, Leongatha, 3953	Govt		•	•	•			•	•	•	•	•	•	•	•		
Goolum Goolum Aboriginal Cooperative, 143–145 Baillee St, Horsham 3400	ATSI				•						•		•		•		
Goulburn Valley CHS, PO Box 1167, Shepparton 3632	Govt				•								•				
Goulburn Valley Health D&S Service, 116 Nixon St, Shepparton 3630	Govt	•	•					•	•				•		•		
Grampians CHC, 40–44 Wimmera St, Stawell 3380	Govt			•							•				•		
Gunditjmara Aboriginal Cooperative, Harris St Reserve, Warrnambool, 3280	ATSI			•							•		•		•		
Hanover Southbank Crisis Centre, 52 Haig St, South Melbourne, 3205	NGO									•		•		•			
Health Works, 4–12 Buckley St, Footscray 3011	NGO												•		•		
Ignatius Centre, Jesuit Social Services, 371 Church St, Richmond 3121	NGO			•							•		•		•		
Inner South CHS, 240 Malvern Rd, Prahran 3181	Govt			•							•						
Inner South CHS, 341 Coventry St, South Melbourne 3205	Govt			•							•						
Inner South CHS, 10 Inkerman St, St Kilda 3182	Govt			•							•						
Inner South CHS, 18 Mitford St, St Kilda 3182	Govt			•							•						

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
ISIS Primary Care, Voyage Program, C/o ISIS, Deer Park 3023	NGO				•						•		•		•		
Joseph's Corner, 3 Birmingham St, Yarraville 3013	NGO				•						•		•		•		
Kawinda House North West Alcohol Rehabilitation Centre, 37 Third St, Merbein 3505	ATSI					•								•			
Kirrae Whurroong Community Inc, 2 Kirrae Ave, Purnim 3278	ATSI				•						•		•				
Knox CHS, 1063 Burwood Hwy, Ferntree Gully 3156	Govt				•												
Lake Tyers Aboriginal Trust, Rules Rd, Lakes Entrance 3909	ATSI			•		•				•		•		•			
Lakes Entrance CHC, 18 Jemmison St, Lakes Entrance 3909	Govt			•		•				•		•		•			
Lakes Entrance CHC, 27 Riverine St, Bairnsdale 3875	Govt	•		•						•		•					
Latrobe Community Health Moe, 42–44 Fowler St, Moe 3825	Govt	•		•				•		•		•		•			
Latrobe Community Health Morwell, 251 Princes Drive, Morwell 3840	Govt	•		•				•		•		•		•			
Latrobe Community Health Sale, 67–69 Macalister St, Sale 3850	Govt	•		•				•		•		•		•			
Latrobe Community Health Warragul, Williams Lane & Mason St, Warragul 3820	Govt	•		•				•		•		•		•			
LifeLine, Wesley Mission, 148 Lonsdale St, Melbourne 3000	NGO				•												
Living Room Primary Health Service, 7–9 Hosier Lane, Melbourne 3000	NGO				•						•		•				
MacKillop Family Services, St Anthony's, 118 Commercial Rd, Footscray 3011	NGO	•		•		•				•		•		•			

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Maroondah Addictions Recovery Project, 17 Clarke St, Lilydale 3140	Govt			•		•											
Mary of the Cross Centre, 7 Brunswick St, Fitzroy 3065	NGO				•												
Maryborough & District Health Service, 185 High St, Maryborough 3465	Govt		•		•						•		•		•		
Maternity Outreach Support Service, Sunshine Hospital, Furlong Rd, Sunshine 3020	Govt								•				•				
Melbourne Clinic, 130 Church St, Richmond 3121	Private	•		•	•			•	•		•			•	•		
Mildura Aboriginal Corporation, 120 Madden Ave, Mildura 3550	ATSI	•			•	•					•			•		•	
Mitchell CHS, 72 Ferguson St, Broadford 3658	Govt		•		•		•				•		•		•		
Moorabool AOD Counselling & Education Service, Turner St, Bacchus Marsh 3340	Govt				•								•		•		
Moreland Community Health Services Inc RAFT Program, 21 Victoria St, Coburg 3058	NGO				•												
Moreland Hall Addictions Recovery Centre, 26 Jessie St, Moreland 3058	NGO	•	•		•	•					•		•		•		•
Mountview Corner House, 4 Mountainview St, Croydon 3136	Private		•		•				•						•		
Narconon, 1025 Woods Point Rd, Warburton 3799	NGO	•		•		•											
NEODAS (North Eastern Outreach D&A Service) Banyule CHS, Cnr Catalina St & Alamein Rd, West Heidelberg 3084	Govt				•						•		•		•		
NEODAS Banyule CHS Correctional Counselling, Cnr Catalina St & Alamein Rd, West Heidelberg 3084	Govt				•												
NEODAS Banyule CHS Greensborough, 3/25 Grimshaw St, Greensborough 3088	Govt				•												

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
NEODAS Eltham CHC, 917 Main St, Eltham 3095	Govt				•												
NEODAS Plenty Valley CHS, 187 Cooper St, Epping 3076	Govt				•												
New Life Program, 43 Carrington Rd Box Hill 3128	NGO				•						•		•				
Ngwala Willumbong Coop, Galiamble Recovery Centre, 10 Mitchell St, St Kilda 3182	ATSI			•		•				•		•		•			
Ngwala Willumbong Coop, Head Office & Outreach Service, 93 Wellington St, Windsor 3181	ATSI				•						•				•	•	
Ngwala Willumbong Coop, Koori Community A&D Resource Service, 157 Separation St, Northcote 3070	ATSI				•												
Ngwala Willumbong Coop, Lilydale, 47 Castella St, Lilydale 3140	ATSI				•												
Ngwala Willumbong Coop, Percy Green Memorial Recovery Centre, 985 Toolamba Rd, Toolamba 3614	ATSI				•	•					•				•		
Ngwala Willumbong Coop, Sobering Up Centre, 150 Separation St, Northcote 3070	ATSI				•							•					
Ngwala Willumbong Coop, Winja Ulupna Women's Rehabilitation Centre, 14 Charnwood Cres, St Kilda 3182	ATSI			•		•				•							
Njernda Aboriginal Corporation, 84 Hare St, Echuca 3564	ATSI		•		•	•	•			•	•	•	•	•	•		
North Richmond CHC – counselling, 23 Lennox St, North Richmond 3121	Govt				•			•			•		•		•		
North Yarra CHC – Carlton, Collingwood, Fitzroy 365 Hoddle St, Collingwood 3066	Govt				•			•					•				•
North Yarra CHC, Next Door 350 Smith St, Collingwood 3066	NGO				•		•	•									•
Northern District CHS, 98 Nolan St, Kerang 3579	Govt	•	•	•	•					•	•	•	•	•	•		

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Odyssey House – community services, 81–85 Barry St, Carlton 3053	NGO				•						•						
Odyssey House – residential rehabilitation, 28 Bonds Rd, Lower Plenty 3093	NGO					•											
Odyssey Southern Youth and Family Services, 17 Grattan St, Prahran 3181	NGO				•						•		•				
Open Family Hume, Wangaratta 3660	NGO										•				•		
Open Family South East Melbourne, Dandenong 3175	NGO										•				•		
Open Family Inner Melbourne, South Melbourne 3205	NGO										•				•	•	
Open Family North West Melbourne, Footscray 3012	NGO										•				•		
Ovens & King CHS, 86–90 Rowan St, Wangaratta 3677	Govt		•		•				•		•		•		•		
Oxford Houses, Addiction Recovery Centres, 26 Jessie St, Moreland 3058	NGO									•		•		•			
Palm Lodge Centre, 25 David St, Horsham 3400	NGO				•		•				•		•		•		
Peninsula D&A Program (PenDAP), Hastings 3915	Govt		•		•										•		
Pinelodge Clinic and Private Hospital, 1480 Heatherton Rd, Dandenong 3175	Private	•		•		•						•		•	•		
Portland District Health, D&A Treatment Services, Portland Hospital, Bentinck St, Portland 3305	Govt		•		•		•						•		•		
Portland District Health, Quamby House, 8 Fern St, Portland 3305	NGO	•	•	•	•				•		•		•				
Ramahyuck Aboriginal Cooperative, 117–121 Forster St, Sale 3850	ATSI				•		•				•		•				

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Raymond Hader Clinic, Suite 16, 20 Commercial Rd, Melbourne 3000	Private	•	•	•	•			•	•	•	•	•	•				
Royal Women's Hospital, Women's Alcohol & Drug Service, 264 Cardigan St, Carlton 3053	Govt				•				•				•		•		
Rumbalara A&D Program, Mooroopna, 20 Rumbalara Rd, Mooroopna 3629	ATSI				•		•		•		•		•		•		
Rumbalara A&D Program, Shepparton, Corio Centre, Shepparton 3630	ATSI				•						•		•		•		
Salvation Army Bridge Program Bendigo, 75 Strickland Rd, Bendigo 3550	NGO				•		•				•		•		•		
Salvation Army Bridge Program Brunswick Youth Outreach, 256 Albert St, Brunswick 3056	NGO				•		•				•		•		•		•
Salvation Army Bridge Program Geelong Adult Withdrawal Unit, Belmont 3216	NGO	•		•		•				•		•					
Salvation Army Bridge Program Overdale Rural Rehabilitation Centre, 455 O'Grady's Rd, Kilmore 3764	NGO			•		•											
Salvation Army Bridge Program St Kilda, 12A Chapel St, St Kilda 3182	NGO		•		•		•				•		•		•		
Salvation Army Bridge Program The Basin Rehabilitation Centre, Olinda Rd, The Basin 3154	NGO			•	•	•				•	•						
Salvation Army Bridge Program Warrnambool, 52–54 Fairy St, Warrnambool 3280	NGO			•	•	•	•			•	•	•	•				
Salvation Army Bridgehaven A&D Rehab for Women, 1a Jackman St, Preston 3072	NGO			•	•	•	•										
Salvation Army Bridgelink Kardinia Women's Services, 1 Riverview Terrace, Belmont 3216	NGO				•					•			•		•		
Salvation Army Community Residential Drug Withdrawal Unit, 81 Victoria Crescent, Abbotsford 3067	NGO	•						•									
Salvation Army EastCare D&A Service, 85 High St, Kew 3101	NGO			•		•	•			•			•				

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Salvation Army Euniki Single Adult Services, 133 Rankins Rd, Kensington 3031	NGO										•						
Salvation Army Westcare Child & Adolescent Services D&A Program, 34 Devonshire Rd, Sunshine 3020	NGO				•						•		•		•		
Salvation Army, Intensive Case Management Services 31–33 Ellingworth Pde, Box Hill 3128	NGO			•	•	•	•			•	•			•	•		
Self Help Addiction Resource Centre, 1/1242 Glenhuntly Rd, Glenhuntly 3163	NGO					•				•							
Someone Who Cares Inc, PO Box 4199, Ringwood 3134	NGO				•						•						
South East A&D Services (SEADS), 229 Thomas St, Dandenong 3175	Govt	•	•		•	•					•		•		•		
South Gippsland A&D Service, Hospital, Koonwarra Rd, Leongatha 3953	Govt		•		•		•		•				•		•		
South West Healthcare, Royt St, Warrnambool 3280	Govt	•	•								•						
Southcity Clinic, 61–69 Brighton Rd, Elwood 3184	Private								•								
Southern Dual Diagnosis Service, 229 Thomas St, Dandenong 3175	Govt										•						
St Luke's Family Care, 175 Hargreaves St, Bendigo 3550	NGO				•												
St Mary's House of Welcome, 165–169 Brunswick St, Fitzroy 3065	NGO				•		•						•		•		
St Paul's Drug Prevention, Rehabilitation and Aftercare Centre, Northern Suburbs of Melbourne 3065	NGO		•		•		•		•		•				•		
St Vincent de Paul, Ozanam House, 179 Flemington Rd, North Melbourne 3051	NGO		•		•					•	•		•		•		
St Vincent de Paul, Quin House, 38–40 George St, Fitzroy 3065	NGO			•						•		•					

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
St Vincent's Hospital, Department of D&A Studies, 82 Fitzroy St, Fitzroy 3065	Govt		•		•				•				•		•		
St Vincent's Hospital, Eastern Regional D&A Withdrawal Service (EDAWS), 82 Fitzroy St, Fitzroy 3065	Govt	•															
Sunbury CHC, 12–28 Macedon St, Sunbury 3429	Govt				•												
Sunraysia CHS, Ramsey Court, Mildura 3500	Govt	•	•		•		•		•				•		•		
Sunshine Hospital Maternity Outreach and Support Service (MOSS), 176 Furlong Rd, Sunshine 3020	Govt				•						•						
Swan Hill & District Hospital Indigenous Community Services, 83 Chapman St, Swan Hill 3585	Govt		•		•		•				•		•		•		
Swan Hill & District Hospital, PO Box 483, Splatt St, Swan Hill 3585	Govt		•		•		•						•		•		
Tandana – Waverley Emergency Adolescent Care (WEAC), 1 Oxford St, Oakleigh 3166	NGO			•		•				•		•		•			
Taskforce Community Agency, 421 South Rd, Moorabbin 3189	NGO				•		•						•		•		
Teen Challenge Victoria, 510 South Boundary Rd, Kyabram 3620	NGO					•											
The Outdoor Experience (TOE), Jesuit Social Services, 1 Langridge St, Collingwood 3066	Govt						•				•						
Tranquilliser Recovery and New Existence (TRANX), 222 Burke Rd, Glen Iris 3146	NGO		•		•		•						•				
Transitions Clinic, Mercy Hospital for Women, Clarendon St, East Melbourne 3002	Govt	•	•		•						•		•				
Turning Point Alcohol & Drug Centre, 54–62 Gertrude St, Fitzroy 3065	NGO		•		•						•				•		
Turning Point, Eastern Specialist Methadone Service, 16 Arnold St, Box Hill 3128	NGO							•									

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Uniting Care Ballarat – Tabor House and Outreach Centre, 105 Dana St, Ballarat 3350	NGO	•		•				•		•		•		•			
Uniting Care Connections, Grassmere Youth Services, 185 Mt Dandenong Rd, Croydon 3136	NGO												•				
Upper Hume CHS, 12 Stanley St, Wodonga 3690	Govt		•		•				•		•						•
Vaucluse Hospital A&D Dependence Unit, 82 Moreland Rd, Brunswick 3056	Private	•	•	•	•	•	•	•	•				•		•		
Victorian Aboriginal Health Service, 186 Nicholson St, Fitzroy 3065	ATSI				•		•								•		
VIVAIDS, 275B Smith St, Fitzroy 3065	NGO			•		•				•							
Voyage, ISIS Primary Care, 1 Andrea St, St Albans 3021	NGO			•		•						•		•			
Warburton Unit, Ivanhoe Private Rehabilitation Hospital, 134–144 Ford St, Ivanhoe 3079	Private	•				•											
Wauthaurong Aboriginal Cooperative, 62 Morgan St, North Geelong 3215	ATSI			•						•		•		•			
Western Region A&D Centre (WRAD), 26 Fairy St, Warrnambool 3280	NGO		•	•				•				•		•			
Whitehorse CHC, 65–67 Carrington Rd, Box Hill 3128	Govt			•								•		•			
Winda Mara Aboriginal Corporation, 21 Scott St, Heywood 3304	ATSI			•								•					
Windana Society Inc, 88 Alma Rd, St Kilda 3182	NGO	•		•		•						•		•			•
Windana Society Therapeutic Community, 254 Snells Rd, Maryknoll 3812	NGO		•		•										•		
Windana Youth Community House – Youth Withdrawal Unit 39a Clow St, Dandenong 3175	NGO	•			•									•			

This list was finalised between July and October 2004

Victoria

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Women for Sobriety, Level 3, 43 Carrington Rd, Box Hill 3128	NGO				•												
Youth Projects Northern Outreach Team (YNOT), 6 Hartington St, Glenroy 3046	NGO										•		•		•		
YSAS (Youth Substance Abuse Service), Birribi, 10 Eucalyptus St, Eltham 3095	NGO					•											
YSAS Bendigo Youth Outreach Team 39 Garsed St, Kangaroo Flat 3555	NGO		•		•						•						
YSAS Box Hill Youth Outreach Team, 953 Whitehorse Rd, Box Hill 3128	NGO		•		•						•						
YSAS City North West Youth Outreach Team, 14–18 Brunswick St, Fitzroy 3065	NGO				•						•						
YSAS Connecting Koori Kids, 108 Buckley St, Morwell 3840	ATSI				•						•						
YSAS Dandenong/Springvale Youth Outreach Team 39a Clow St, Dandenong 3175	NGO		•		•						•						
YSAS Fitzroy Youth Residential Withdrawal Unit, 26–28 Gertrude St, Fitzroy 3065	NGO	•															
YSAS Frankston Youth Outreach Team, 10–12 Keys St, Frankston 3199	NGO				•						•						
YSAS Geelong Youth Residential Withdrawal Unit, 23 Coulter St, Newcomb 3219	NGO	•		•													
YSAS Glen Iris Youth Residential Withdrawal Unit, 5 Summerhill Rd, Glen Iris 3146	NGO	•		•													
YSAS La Trobe Valley Youth Outreach Team, 108 Buckley St, Morwell 3840	NGO				•						•				•		
YSAS Wilum Youth supported accommodation, 329 Napier St, Collingwood 3066	NGO			•						•							

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
55 Central Inc, 55 Central Ave, Maylands 6051	NGO			•								•				•	
Aboriginal Advancement Council, Noongar Patrol System, 201 Beaufort St, Perth 6000	ATSI										•						
Acacia Prison D&A Department, Great Eastern Hwy, Wooroloo 6558	Govt			•						•	•						
Alcohol & Drug Information Services (ADIS), 7 Field St, Mt Lawley 6050	Govt				•						•						
Alcohol Centre of Halls Creek, 94 Thomas St, Halls Creek 6770	NGO				•		•						•		•		
Antenatal Chemical Dependency Clinic, King Edward Memorial Hospital for Women, 374 Bagot St, Subiaco 6008	Govt			•		•				•							
Australian Council on Smoking &Health, Aboriginal Project "Say No To Smokes", Subiaco 6008	NGO											•					
B-Attitudes, 4/69 Hay St, Subiaco 6008	NGO			•		•				•		•					
Bay of Isles Aboriginal Community Family Preventive Programs, 2 Milner St, Esperance 6450	ATSI											•				•	
Bega Garnbirringu Health Service Aboriginal Corp, Beulah Place Residential Treatment Service, via Menzies 6436	ATSI					•											
Bega Garnbirringu Health Service Aboriginal Corp, Sobering-up Shelter, 12–14 McDonald St, Kalgoorlie 6430	ATSI	•															
Bidyandanga Aboriginal Community, Men's Outreach Centre and Women's Group, La Grange, via Broome 6725	ATSI									•						•	
Bunbury Mobile Needle & Syringe Exchange, 52 Wittenoon St, Bunbury 6230	NGO											•				•	
Bundybunna Aboriginal Corp, Bundybunna Farm, Cnr Wongonguy and Eardun Rds, Mullewa 6630	ATSI					•											
Cambridge Private Hospital, 178–184 Cambridge St, Wembley 6014	Private	•		•		•						•					

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Carnarvon Medical Service Aboriginal Corp, 14–16 Rushton St, Carnarvon 6701	ATSI		•		•												
Chesterfield House, Anglicare, Civic Boulevard, Rockingham 6168	NGO			•						•							
Compari – Midwest CDST, PO Box 22, 45 Cathedral Ave, Geraldton 6530	NGO				•						•		•		•		•
Cyrenian House, 318 Fitzgerald St, Perth (PO Box 146 WA 6865) 6000	NGO				•	•					•		•	•	•		•
Cyrenian House, Rick Hamersley Centre, 920 Gnangara Rd, Cullacabardee 6067	NGO					•											
Cyrenian House, Saranna Women's Residential Program, 920 Gnangara Rd, Cullacabardee 6067	NGO			•	•							•	•				
Derbal Yerrigan Health Services, Kwinana Unit, 156 Wittenoom St, East Perth 6004	ATSI				•	•											
Derby's Numbud Patrol, Night Patrol, Ashley St, Derby 6728	ATSI										•						
Drug & Alcohol Withdrawal Network (DAWN), St John of God Health Care, 175 Cambridge St, Subiaco 6008	NGO		•								•		•				
Drug Arm Armadale, 56 Fourth Rd, Armadale 6112	NGO				•								•				•
Drug Arm, Rosella House Geraldton, 11 Bayly St, Geraldton 6530	NGO					•									•		
Eastern Goldfields Aboriginal Community Resource Agency, Wunngagutu Aboriginal Patrol, 114 Dugan St, Kalgoorlie 6430	ATSI										•						
Eastern Goldfields Prison, Vivian St, Boulder 6432	Govt		•						•						•		•
Eastern Metro D&A Services, Next Step, 32 Moore St, East Perth 6004	Govt			•	•			•	•								
Fremantle Hospital Dual Diagnosis Liaison Service, Alma St Centre, Fremantle 6160	Govt	•															

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Garl Garl Walbu Aboriginal Corp Sobering-up Shelter, Ashley St, Derby 6728	ATSI				•		•										
Geraldton Family Advocacy, Yamatji Domestic Violence Counselling & Support Service, 11 Forrest St, Geraldton 6530	NGO				•						•		•				
Geraldton Regional AMS D&A Counselling, PO Box 1689, 30–32 Holland St, Geraldton 6530	ATSI										•						
Geraldton Yamatji Patrol, 103 George Rd, Geraldton 6530	ATSI				•		•						•		•		•
Goldfields CDST, 7–9 Dugan St, Kalgoorlie 6430	NGO				•								•		•		•
Graylands Selby-Lemnos & Special Care Hospital, Brockway Rd, Mount Claremont 6010	Govt	•															
Great Southern CDST, 145 Lower Stirling Tce, Albany 6330	Private			•								•					
Halls Creek People's Church Sobering-up Shelter, Lot 429 Neighbour St, Halls Creek 6770	NGO	•		•		•						•					
Hepatitis Council of WA, 85 Stirling St, Northbridge 6003	NGO			•								•		•			
Hollywood Clinic, Monash Ave, Nedlands 6009	Private		•			•						•					
Holyoake Institute 65 Newcastle St, Perth 6000	NGO										•			•			
Holyoake Men's Residence Mandurah, 7 Cooper St, Mandurah 6210	NGO									•			•				
Joint Service Development Unit, Brockway Rd, Claremont 6010	Govt				•								•				
Joondalup Youth Support Services, 70 Davidson Tce, Joondalup 6027	NGO										•						
Jungarni-Jutiya Alcohol Action Council, Alcohol Education and Counselling Service, 94 Thomas St, Halls Creek 6770	ATSI		•									•					

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Jungarni-Jutiya Alcohol Action Council, Kija Jaru Night Patrol, 94 Thomas St, Halls Creek 6770	ATSI										•						
Kimberley AMS Council, Health Promotion Unit, Cnr Dora and Anne Sts, Broome 6725	ATSI				•		•						•				
Kimberley CDST Broome, Cnr Anne & Walcott St, Broome 6725	Govt		•		•						•				•		
Kimberley CDST Derby, Cnr Neville and Clarendon Sts, Derby 6728	Govt				•								•		•		
Kimberley CDST Kununurra, Coolibah Drive, Kununurra 6743	Govt				•								•		•		
Kuljak Aboriginal Employment Centre, Swan Patrol, 38 Helena St, Midland 6056	ATSI										•						
Kununurra Youth Services Inc, D&A Program, Lot 77 Chestnut Drive, Kununurra 6743	ATSI												•				•
Kununurra-Waringarri Aboriginal Corp, Marralam Alcohol Residential Treatment Program, 232 Speargrass Rd, Kununurra 6743	ATSI				•						•				•		
Kununurra-Waringarri Aboriginal Corp, Miriwong Community Patrol, 230 Speargrass Rd, Kununurra 6743	ATSI										•						
Kununurra-Waringarri Aboriginal Corp, Moongong Dawang Sobering-up Shelter, 232 Speargrass Rd, Kununurra 6743	ATSI	•															
Kununurra-Waringarri Aboriginal Corp, Waringarri Alcohol Project, 232 Speargrass Rd, Kununurra 6743	ATSI				•		•				•						
Kuwinywardu Aboriginal Resource Unit, Carnarvon Community Night Patrol, 272 Robinson St, Carnarvon 6701	ATSI																
Mamabulanjin Aboriginal Corp, Kullari Patrol, Dora St, Broome 6725	ATSI										•						
Mercy Mainline, 18 Barrett St, Wembley 6014	NGO				•								•				
Milliya Rumurra Aboriginal Corp, 78 Great Northern Hwy, Broome 6725	ATSI	•		•	•		•					•	•				

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Mindi Bungu Local Drug Action Group Youth Activities, Mindi Bungu, between Halls Creek & Balgo 6770	ATSI												•				•
Mission Australia Youth Withdrawal and Respite Service, 129 Hill St, East Perth 6004	NGO				•	•					•	•		•	•		
Mission AustraliaYirra, 129 Hill St, East Perth 6004	NGO			•		•						•					
Mullewa Employment & Economic Development Aboriginal Corp Mayu Patrol, 25 Jose St, Mullewa 6630	ATSI										•						
Ngaanyantjarra Health Service, Petrol sniffing prevention program, Ngaanyatjarra, Western Desert border	ATSI																•
Ngangganawili ACCH & Medical Services Ganah Ganah Patrol, Thompson St, Wiluna 6646	ATSI																•
Ngangganawili ACCH & Medical Services Rehabilitation Counselling, Thompson St, Wiluna 6646	ATSI				•		•										
Ngangganawili ACCH & Medical Services Sobering-Up Shelter, Thompson St, Wiluna 6646	ATSI	•															
Ngnowar-Aerwah Aboriginal Corp Seven Mile Alcohol Rehabilitation Program, Great Northern Hwy, Wyndham 6740	ATSI				•		•						•				
Ngnowar-Aerwah Aboriginal Corp Warriu Patrol, Great Northern Hwy, Wyndham 6740	ATSI										•						
Nindilingarri Cultural Health Centre Fitzroy Crossing Sobering-up Centre, Fallon Rd, Fitzroy Crossing 6765	ATSI	•															
Nindilingarri Cultural Health Centre Marrala Patrol, Great Northern Hwy, Fitzroy Crossing 6765	ATSI										•						
Ninga Mia Village Aboriginal Corp Substance Abuse Program, PO Box 421, Kanawana Rd, Kalgoorlie 6430	ATSI				•		•						•				•
Niola Private Hospital, 61–69 Cambridge St, West Leederville 6007	Private	•		•		•		•									
Noongar Alcohol & Substance Abuse Service, 176 Wittenoom St, East Perth 6004	ATSI				•		•				•						•

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Noongar Alcohol & Substance Abuse Service Lunch Program, 176 Wittenoom St, East Perth 6004	ATSI						•										
Noongar Alcohol & Substance Abuse Service Youth Outreach Program, 176 Wittenoom St, East Perth 6004	ATSI										•						
North East Metro CDST, Oak House, 14 Sayer St, Midland 6065	NGO				•		•				•		•		•		
North East Regional Youth Council, 78 Morrison Rd, Midland 6065	NGO				•								•				•
North Metro CDST, St John of God Hospital, 175 Cambridge St, Subiaco 6008	NGO				•		•				•		•		•		•
North Metro D&A Services, Next Step, Dugdale St, Warwick 6024	Govt						•				•				•		
Outcare, 21 Moore St, East Perth 6005	Govt				•		•						•		•		
Pakala Patrol, Throssell Rd, South Hedland 6722	ATSI										•						
Palmerston Association, 134 Palmerston St, Perth 6000	NGO		•		•		•				•		•		•		
Palmerston Farm, Kwinana Freeway, Wellard 6170	NGO				•		•						•				
Perth CDST, 77 Bennett St, East Perth 6004	Govt				•						•		•		•		
Perth Naltrexone Clinic, 65 Townshed Rd, Subiaco 6008	NGO		•		•				•		•						
Perth Women's Centre, 122 Aberdeen St, Northbridge 6003	NGO		•		•						•		•		•		•
Pilbara CDST, Roberts St, South Hedland 6722	NGO		•		•		•				•		•		•		•
Pipunya Group Inc Blue Light Disco, Pipunya Community, via Marble Bar 6760	ATSI																•

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Port Hedland Sobering-up & Outreach Centre, Forrest Circle, South Hedland 6721	NGO																
Prospect Lodge, 11 Porter St, Kalgoorlie 6430	NGO			•						•							
Roebourne Minnga Patrol, 11 Queens St, Roebourne 6718	ATSI										•						
Roebourne Sobering-up Shelter, 11 Queens St, Roebourne 6718	ATSI																
Ruah Centre (formerly Marillac), 33 Shenton St, Northbridge 6003	NGO				•								•				
Salvation Army Bridge House Sobering Up Centre, 15 Wright St, Highgate 6003	NGO	•				•								•			
Salvation Army Bridge Program Counselling, 16 Bulwer St, Highgate 6003	NGO				•												
Salvation Army Bridge Program Residential Rehabilitation, 16 Bulwer St, Highgate 6003	NGO	•	•		•	•					•	•	•	•	•	•	
Salvation Army, Harry Hunter Rehabilitation Centre, 2498 Albany Hwy, Gosnells 6110	NGO			•	•	•				•	•		•		•	•	
Serenity Lodge, 106 Lewington St, Rockingham 6168	NGO					•	•			•				•			
Shire of Leonora, Leonora Patrol, 16 Tower St, Leonora 6438	Govt										•						
South East Metro CDST, 1 Hamilton St, Cannington 6107	NGO		•		•								•		•		•
South Metro CDST, 223 High St, Fremantle 6160	NGO		•		•		•				•		•		•		•
South Metro CDST – Mandurah Office, 22b Tuckey St, Mandurah 6210	NGO		•		•						•		•		•		•
South Metro D&A Centre, Next Step, 22 Queen St, Fremantle 6160	Govt						•				•				•		

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
South West AMS Stolen Generation Project, 167 Spencer St, Bunbury 6231	ATSI				•								•				
South West CDST, 52 Wittenoom St, Bunbury 6230	NGO		•		•		•		•		•		•		•		•
St Patrick's Community Support Centre, 9 Parry St, Fremantle 6160	NGO			•								•				•	
Substance Drug Information & Counselling Service, 40 Charles St, Bunbury 6230	NGO				•								•				
Swan Emergency Accommodation, 53 Great North Hwy, Midland 6056	NGO				•								•		•		
Teen Challenge Esperance, Campbells Rd, Gibson 6448	NGO		•							•				•			•
Teen Challenge Perth, 56 Creaney Drive, Kingsley 6026	NGO		•							•				•			•
WA AIDS Council (WAAC), 664 Murray St, West Perth 6005	NGO		•														•
WA Substance Users Association Inc (WASUA), 440–444 William St, Northbridge 6003	Govt	•	•									•		•			•
Walangari Broome Sobering-up Shelter, 5 Hammersley St, Broome 6725	Govt	•															
Warburton Community Corp Kanpa Substance Abuse Bail Centre, Petermann 0870	ATSI					•											
Warburton Community Corp Warburton Patrol, Petermann 0870	ATSI									•							
Warminda Intensive Intervention Centre, Welshpool Rd, East Victoria Park 6101	Govt																
Warmun Community Youth Activities, Warmun Community, Turkey Creek 6743	ATSI																•
Wesley Hearth, Wesley Centre, 93 William St, Perth 6000	NGO				•										•		

This list was finalised between July and October 2004

Western Australia

		Detoxification R	Detoxification N	Counselling R	Counselling N	Rehabilitation R	Rehabilitation N	Pharmacotherapy R	Pharmacotherapy N	Support R	Support N	Information R	Information N	Assessment R	Assessment N	Other R	Other N
Western Desert Punturkurnupana Aboriginal Corp, Tartilla Aboriginal Street Patrol, 24 Mindarra Drive Newman 6753	ATSI										•						
Wheatbelt CDST, 30 Fitzgerald St, Northam 6401	NGO		•		•						•		•		•		
Women's Health Care House, 100 Aberdeen St, Northbridge 6003	NGO				•								•				
Wongatha Wonganarra, Laverton Patrol, Laverton 6440	ATSI										•						
YMCA – Lynks, 180 Goderich St, East Perth 6004	NGO			•	•								•				
Youth Involvement Council, 69 Stanley St, South Hedland 6722	NGO				•												
YouthLink, 223 James St, Northbridge 6003	NGO				•						•						
Yulella Fabrications Aboriginal Corp Community Patrol, 848 Marmont St, Meekatharra 6642	ATSI										•						
Yuriny Culture Centre, Dry Out Project, Azizza Aziz, Cnr Lock and Stanley Sts, Derby 6728	ATSI	•				•											
Zonta House Refuge Association, 4 Shirley Ave, Mount Pleasant 6153	NGO																•

This list was finalised between July and October 2004

Appendix 4: Maps

Maps of Australia as a whole

Detoxification is offered by 351 services (140 residential and 211 non-residential)

Rehabilitation is offered by 362 services (197 residential and 165 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 203 services (47 residential and 156 non-residential)

Counselling is offered by 895 services (169 residential and 726 non-residential)

Support and case management is offered by 589 services (134 residential and 455 non-residential)

Information and education is offered by 698 services (140 residential and 558 non-residential)

Assessment only is offered by 616 services (107 residential and 509 non-residential)

Other treatment services are offered by 146 services (21 residential and 125 non-residential)

The location of the 1,118 services in Australia is shown in six maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and case management
- residential
- non-residential

Map 4: Counselling
- residential
- non-residential

Map 5: Information and education
- residential
- non-residential

Map 6: Assessment only
- residential
- non-residential

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 to 6.

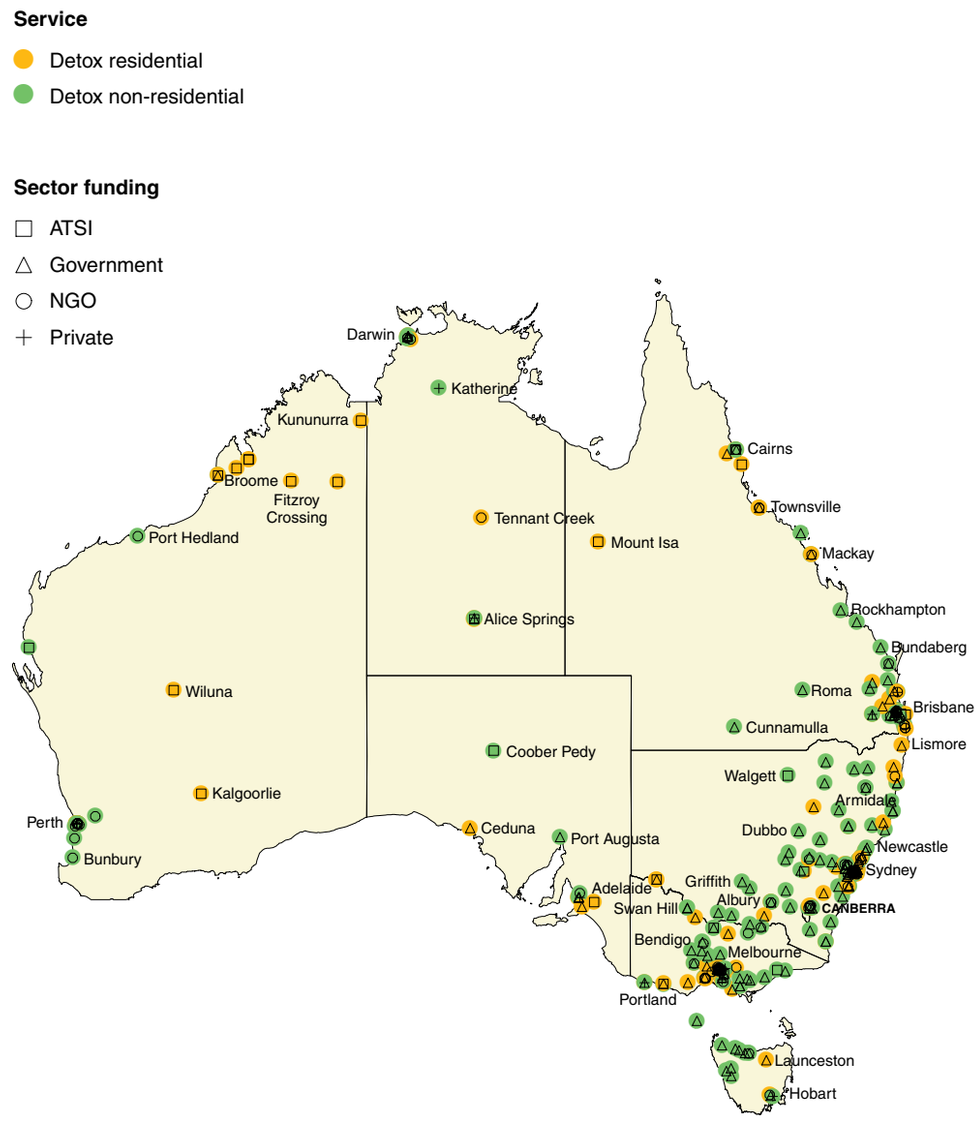
Sectors are indicated by these symbols:

□ Aboriginal and Torres Strait Islander services

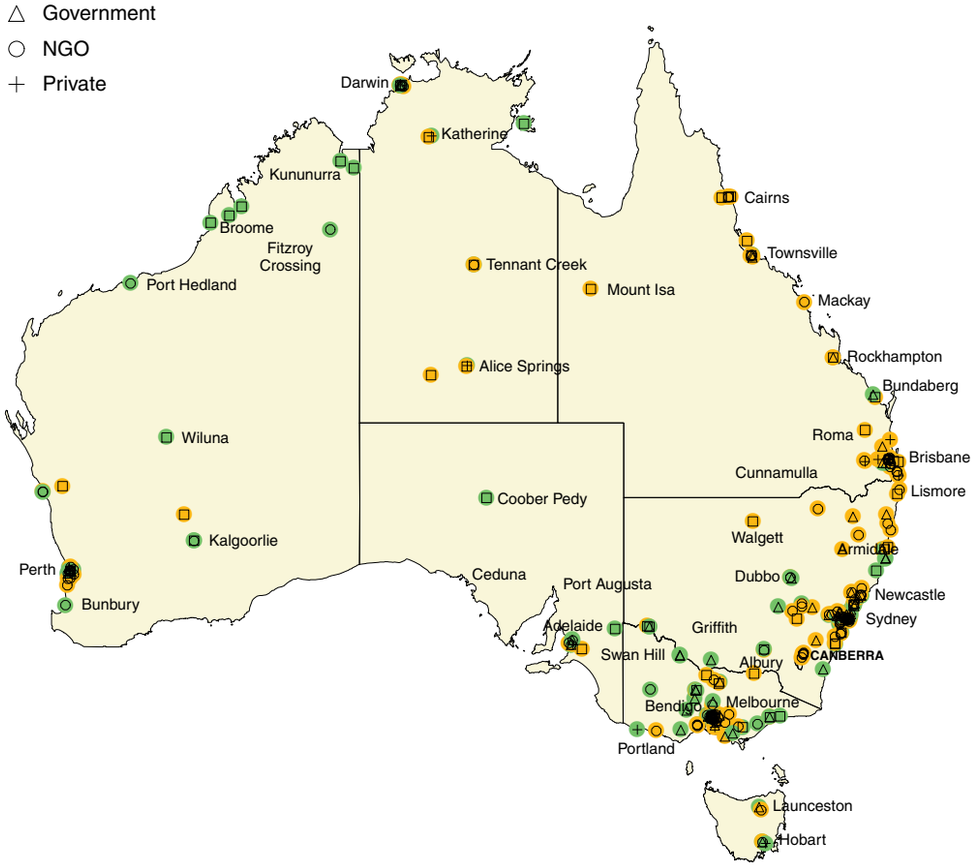
△ Public sector government services

○ Non-government organisations

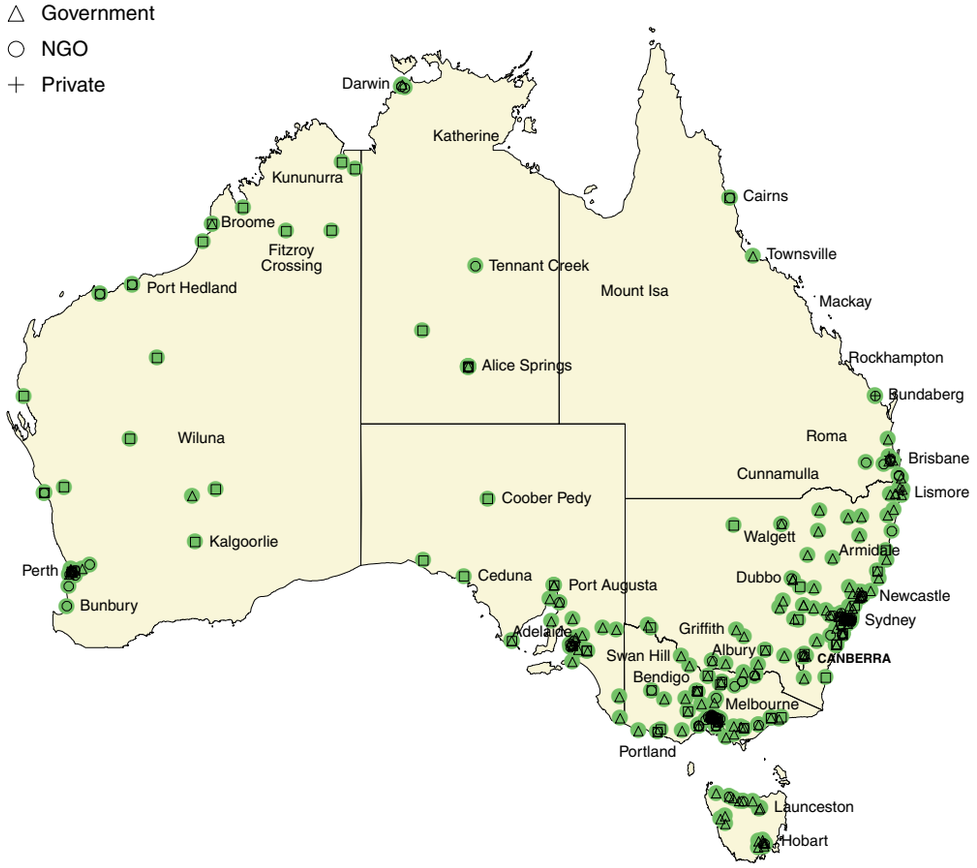
+ Private providers



Map 1: Location of detox treatment services by sector funding, Australia, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, Australia, 2002–2004



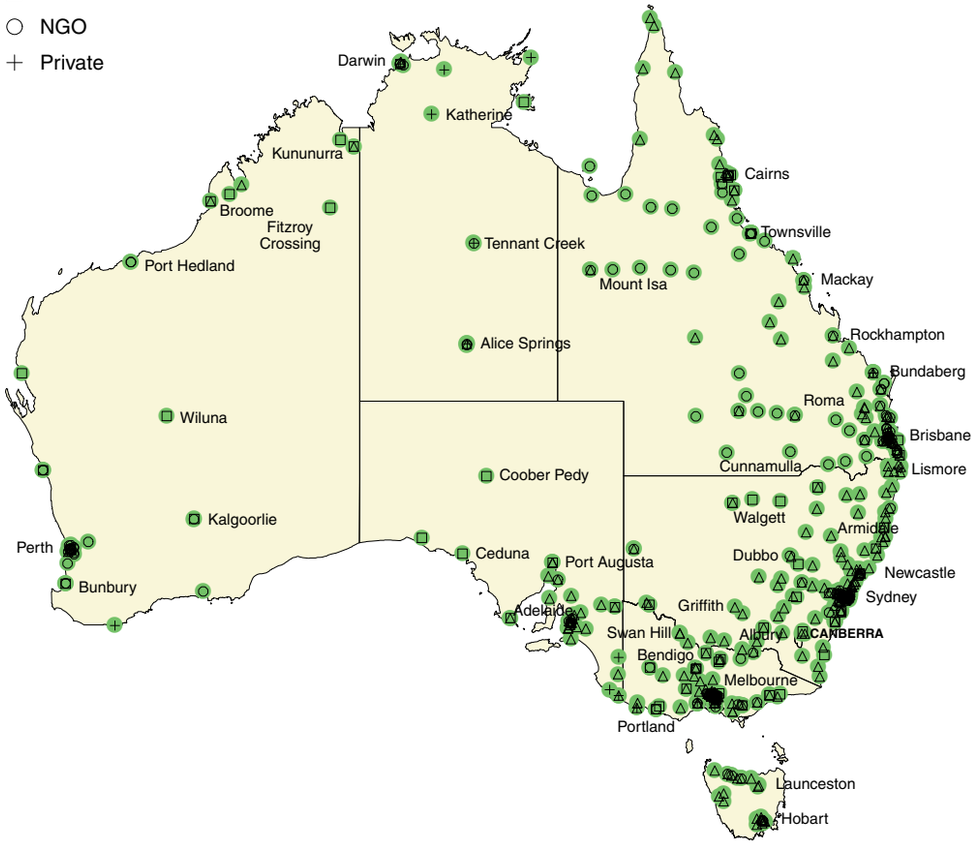
Map 3: Location of support/case management services by sector funding, Australia, 2002–2004

Service

Counselling non-residential

Sector funding

ATSI
Government
NGO
Private



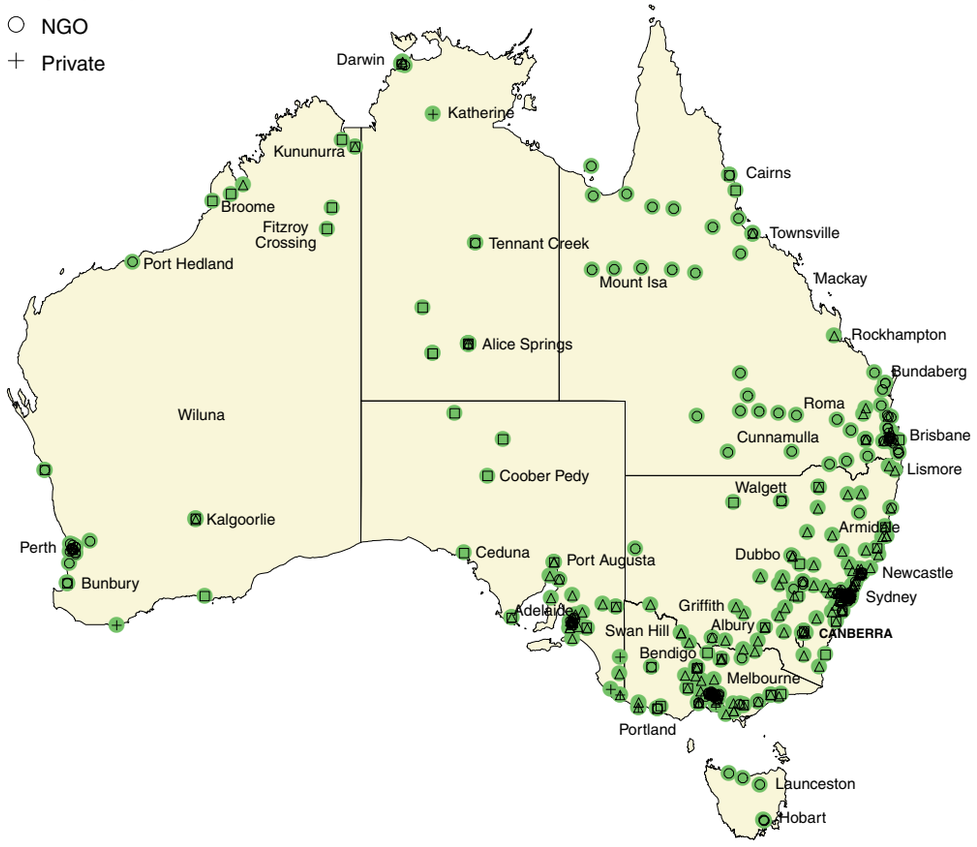
Map 4: Location of counselling treatment services by sector funding, Australia, 2002–2004

Service

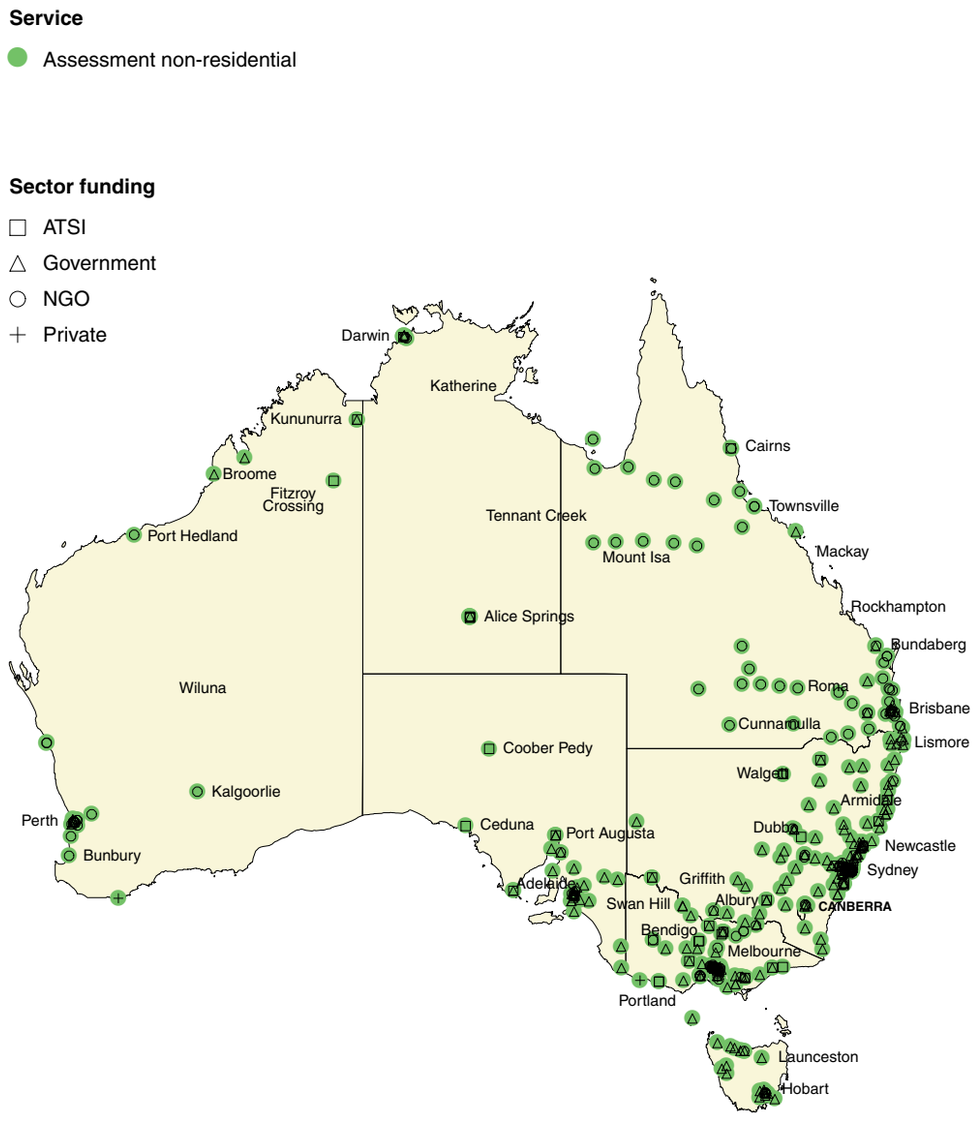
Information/education non-residential

Sector funding

ATSI
Government
NGO
Private



Map 5: Location of information/education services by sector funding, Australia, 2002–2004



Map 6: Location of assessment services by sector funding, Australia, 2002–2004

Australian Capital Territory maps

Detoxification is offered by 7 services (4 residential and 3 non-residential)

Rehabilitation is offered by 7 services (6 residential and 1 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 4 services (1 residential and 3 non-residential)

Counselling is offered by 8 services (2 residential and 6 non-residential)

Support and case management is offered by 10 services (5 residential and 5 non-residential)

Information and education is offered by 9 services (2 residential and 7 non-residential)

Assessment only is offered by 5 services (1 residential and 4 non-residential)

Other treatment services are offered by 5 services (1 residential and 4 non-residential)

The location of the 15 services in the Australian Capital Territory is shown in four maps

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and counselling
- support (non-residential)
- counselling (non-residential)
- both support and counselling (non-residential)

Map 4: Information and assessment
- information (non-residential)
- assessment (non-residential)
- both information and assessment (non-residential)

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 and 4.

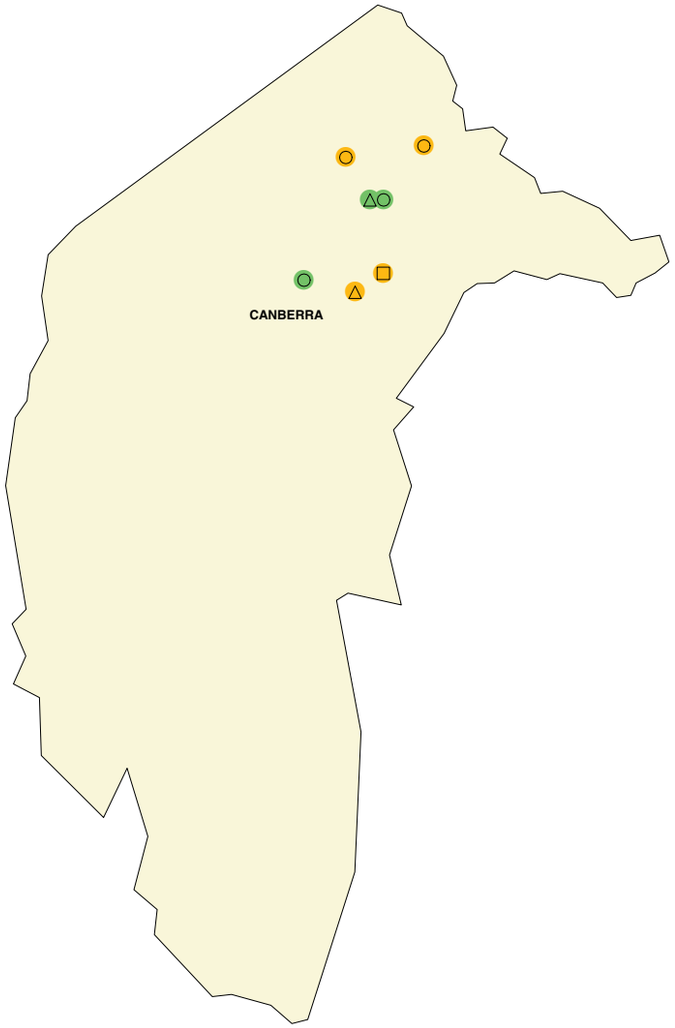
Sectors are indicated by these symbols:

□ Aboriginal and Torres Strait Islander services

△ Public sector government services

○ Non-government organisations

+ Private providers



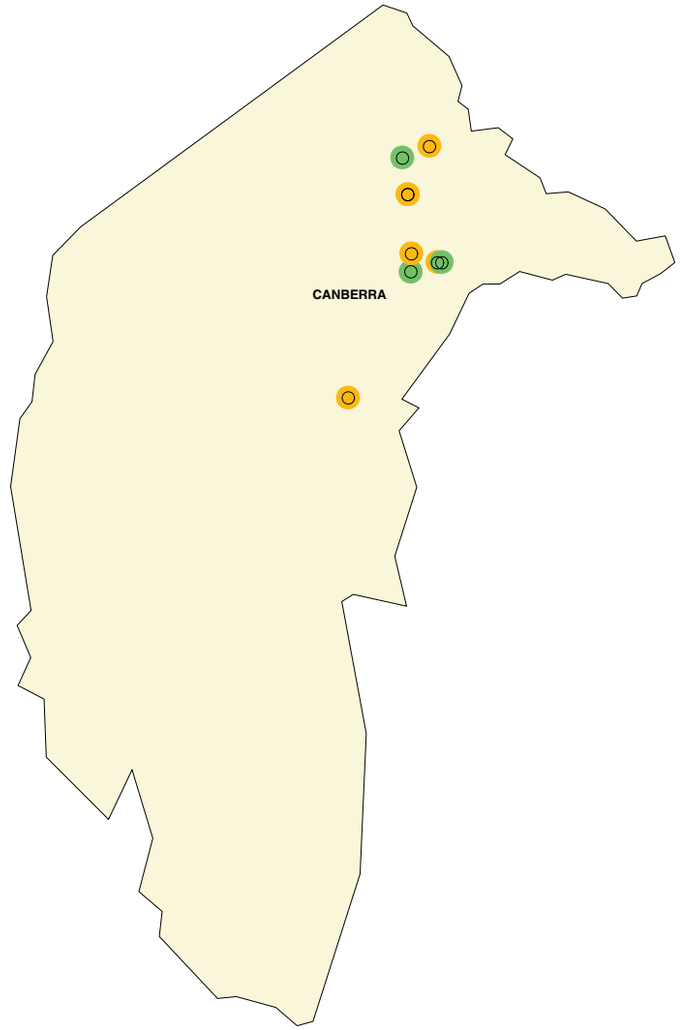
Service

- Detox residential
- Detox non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 1: Location of detox treatment services by sector funding, Australian Capital Territory, 2002–2004



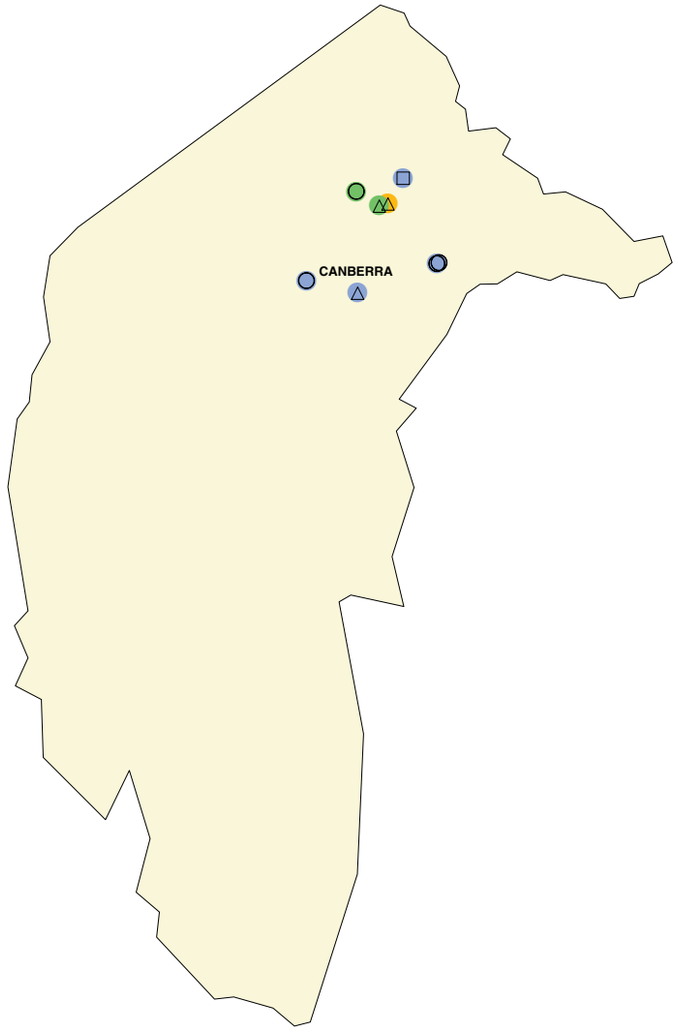
Service

- Rehabilitation residential
- Rehabilitation non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 2: Location of rehabilitation treatment services by sector funding, Australian Capital Territory, 2002–2004



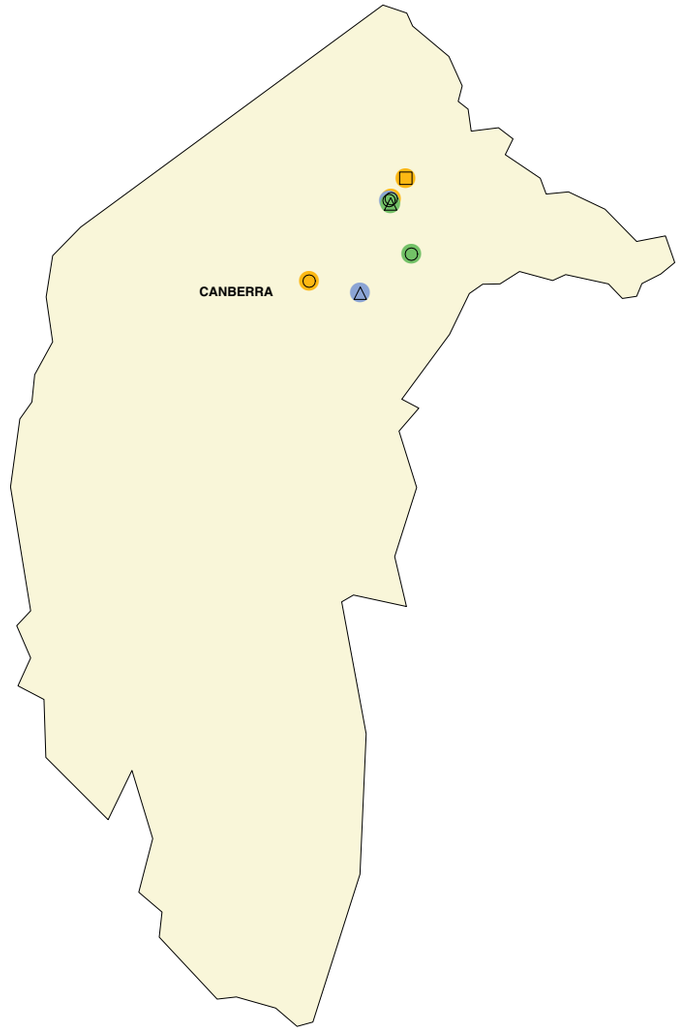
Service

- Support/case management non-residential
- Counselling non-residential
- Support/case management & counselling non-residential

Sector funding

- ATSI
- Government
- NGO

Map 3: Location of support/case management and counselling treatment services by sector funding, Australian Capital Territory, 2002–2004



Service

- Information/education non-residential
- Assessment non-residential
- Information/education & assessment non-residential

Sector funding

- ATSI
- Government
- NGO

Map 4: Location of information/education and assessment services by sector funding, Australian Capital Territory, 2002–2004

New South Wales maps

Detoxification is offered by 117 services (48 residential and 69 non-residential)

Rehabilitation is offered by 134 services (79 residential and 55 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 80 services (19 residential and 61 non-residential)

Counselling is offered by 299 services (74 residential and 225 non-residential)

Support and case management is offered by 236 services (77 residential and 159 non-residential)

Information and education is offered by 294 services (82 residential and 212 non-residential)

Assessment only is offered by 273 services (65 residential and 208 non-residential)

Other treatment services are offered by 32 services (7 residential and 25 non-residential)

The location of the 353 services in New South Wales is shown in six maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and case management
- residential
- non-residential

Map 4: Counselling
- residential
- non-residential

Map 5: Information and education
- residential
- non-residential

Map 6: Assessment only
- residential
- non-residential

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 to 6.

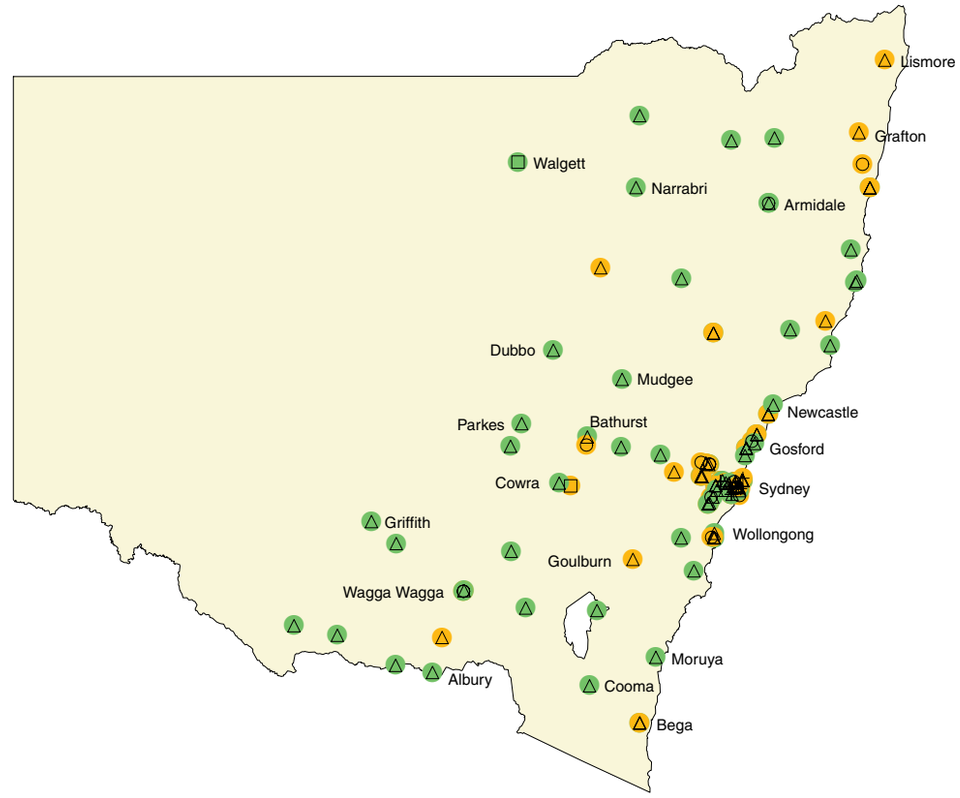
Sectors are indicated by these symbols:

☐ Aboriginal and Torres Strait Islander services

△ Public sector government services

○ Non-government organisations

\+ Private providers



Map 1: Location of detox treatment services by sector funding, New South Wales, 2002–2004

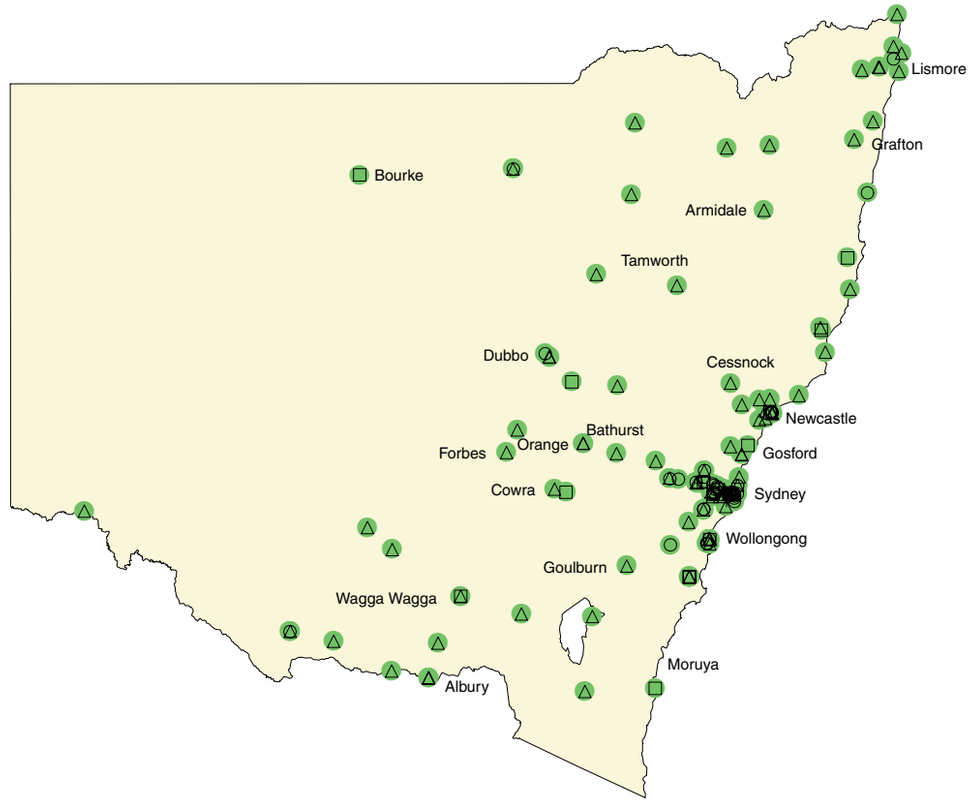
Service

- Rehabilitation residential
- Rehabilitation non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 2: Location of rehabilitation treatment services by sector funding, New South Wales, 2002–2004



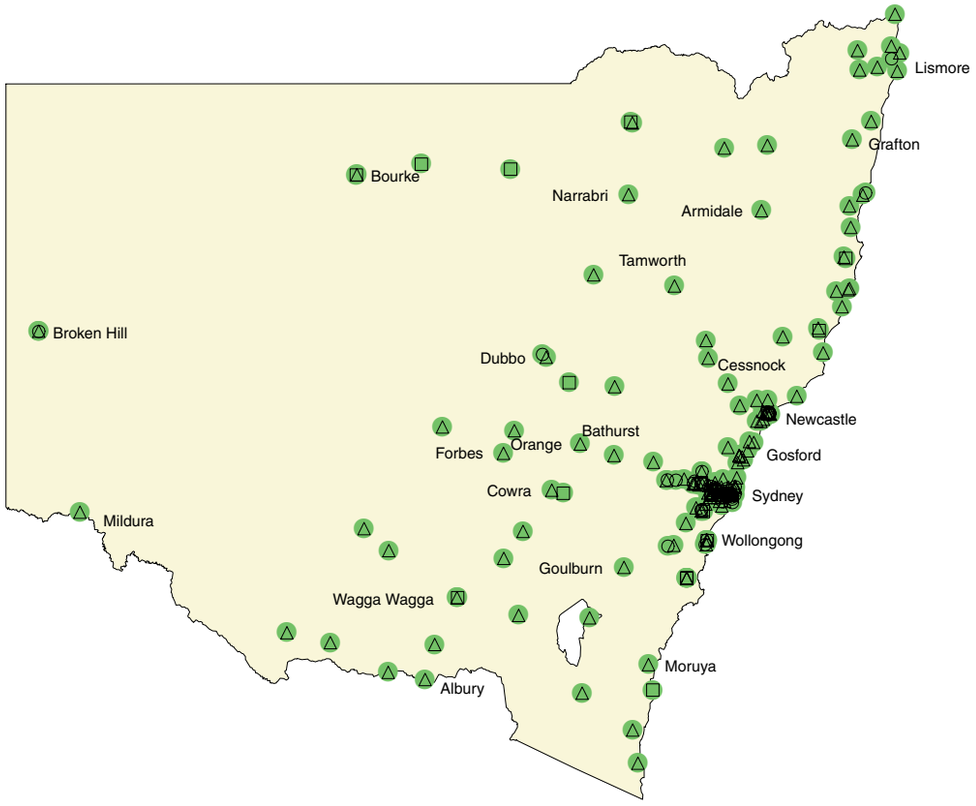
Service

- Support/case management residential
- Support/case management non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 3: Location of support/case management services by sector funding, New South Wales, 2002–2004



Service

- Counselling residential
- Counselling non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 4: Location of counselling treatment services by sector funding, New South Wales, 2002–2004

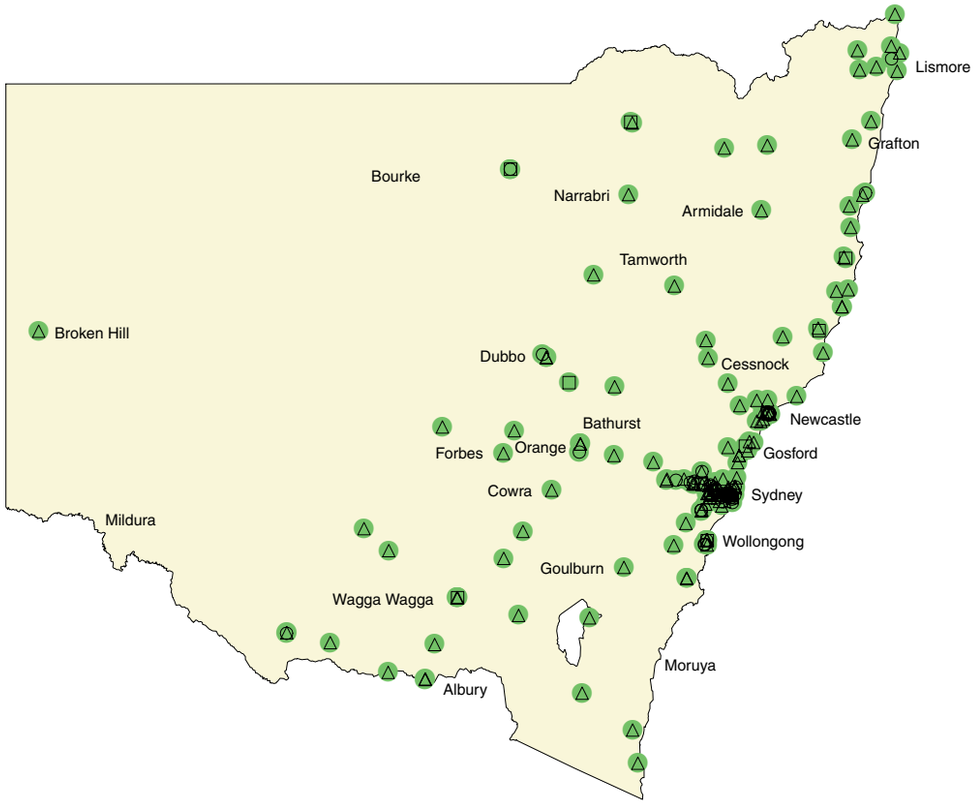
Service

- Information/education residential
- Information/education non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 5: Location of information/education services by sector funding, New South Wales, 2002–2004



Service

- Assessment residential
- Assessment non-residential

Sector funding

- ☐ ATSI
- △ Government
- ○ NGO
- \+ Private

Map 6: Location of assessment services by sector funding, New South Wales, 2002–2004

Northern Territory maps

Detoxification is offered by 14 services (6 residential and 8 non-residential)

Rehabilitation is offered by 21 services (10 residential and 11 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 3 services (1 residential and 2 non-residential)

Counselling is offered by 30 services (11 residential and 19 non-residential)

Support and case management is offered by 36 services (3 residential and 33 non-residential)

Information and education is offered by 23 services (5 residential and 18 non-residential)

Assessment only is offered by 15 services (6 residential and 9 non-residential)

Other treatment services are offered by 19 services (1 residential and 18 non-residential)

The location of the 56 services in the Northern Territory is shown in four maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

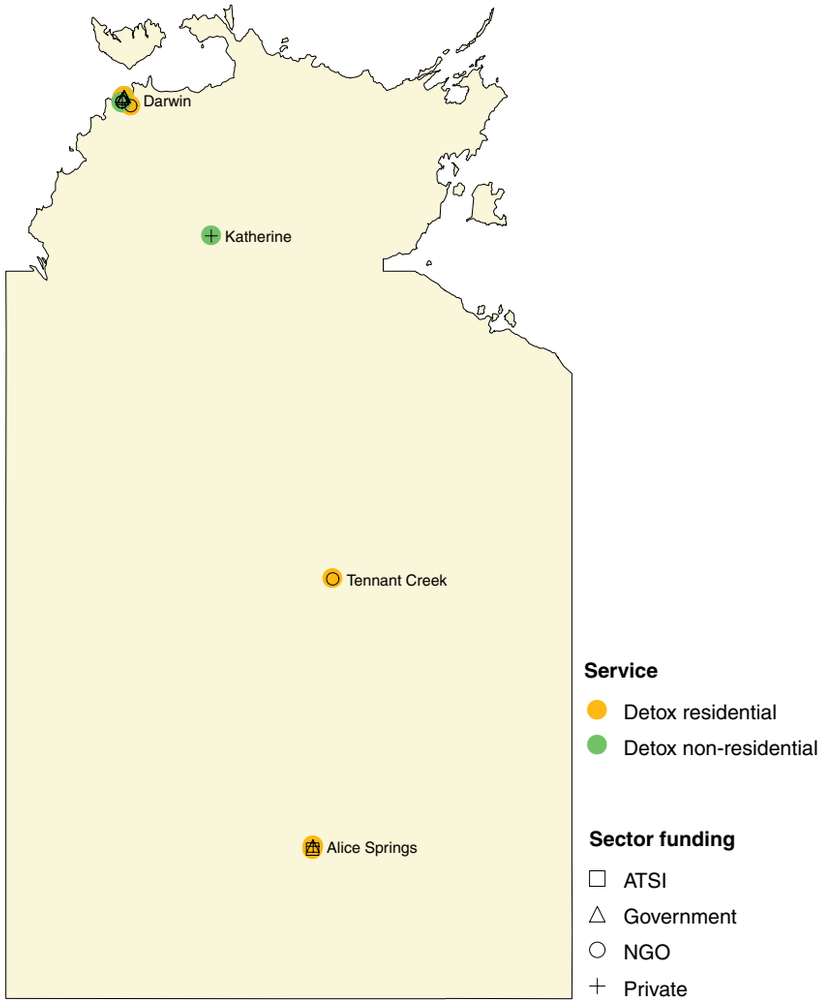
Map 3: Support and Counselling
- support (non-residential)
- counselling (non-residential)
- both support and counselling (non-residential)

Map 4: Information and assessment
- information (non-residential)
- assessment (non-residential)
- both information and assessment (non-residential)

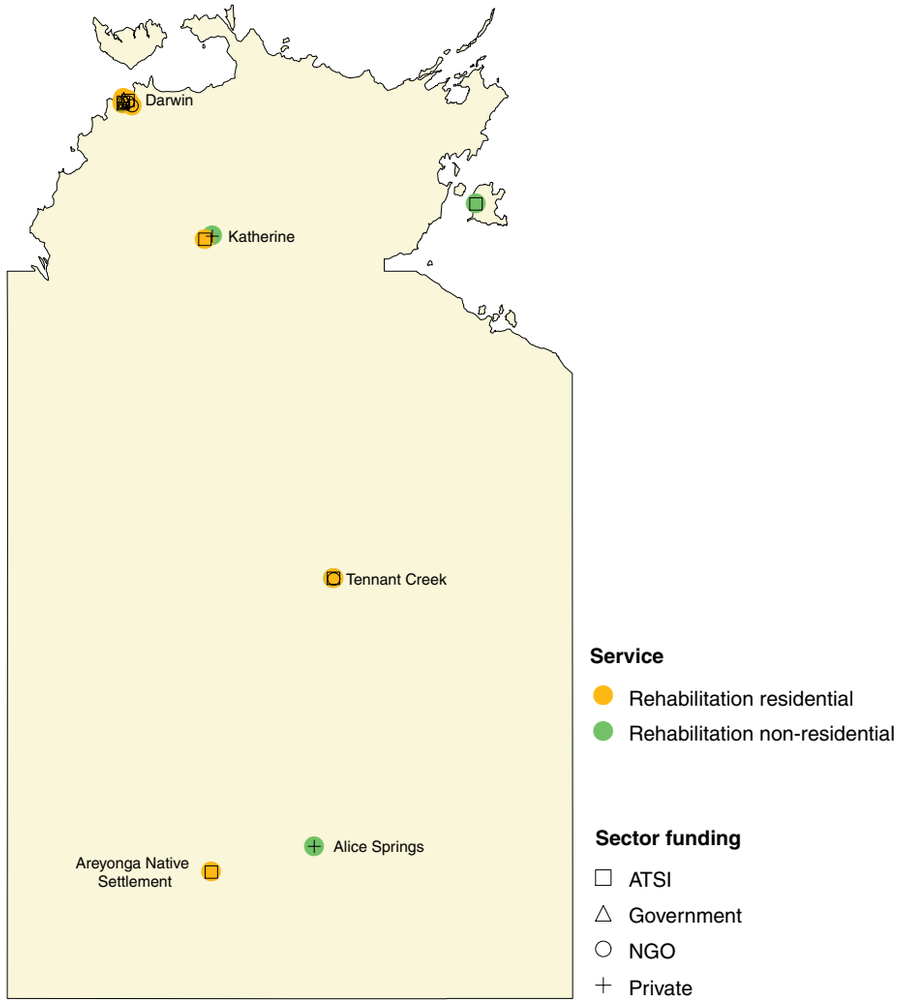
Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 and 4.

Sectors are indicated by these symbols:

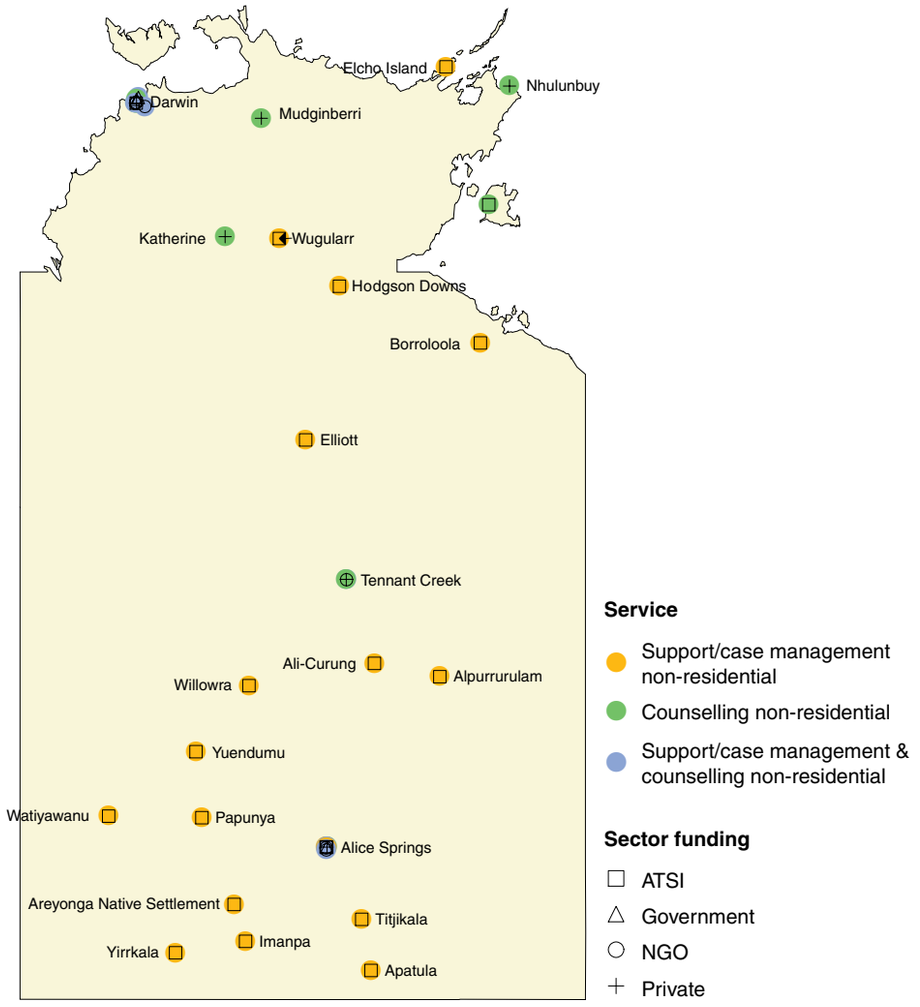
- ☐ Aboriginal and Torres Strait Islander services
- △ Public sector government services
- ○ Non-government organisations
- \+ Private providers



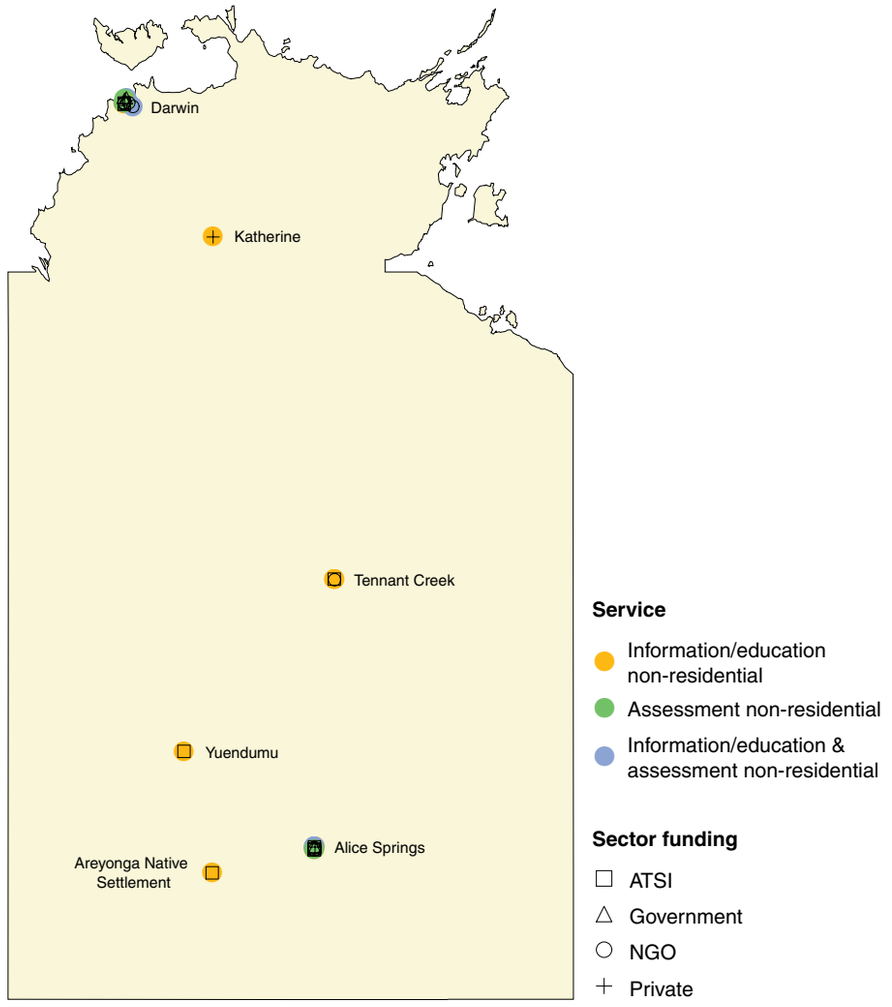
Map 1: Location of detox treatment services by sector funding, Northern Territory, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, Northern Territory, 2002–2004



Map 3: Location of support/case management and counselling treatment services by sector funding, Northern Territory, 2002–2004



Map 4: Location of information/education and assessment services by sector funding, Northern Territory, 2002–2004

Queensland maps

Detoxification is offered by 62 services (24 residential and 38 non-residential)

Rehabilitation is offered by 52 services (42 residential and 10 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 22 services (4 residential and 18 non-residential)

Counselling is offered by 187 services (18 residential and 169 non-residential)

Support and case management is offered by 25 services (7 residential and 18 non-residential)

Information and education is offered by 91 services (10 residential and 81 non-residential)

Assessment only is offered by 69 services (6 residential and 63 non-residential)

Other treatment services are offered by 12 services (3 residential and 9 non-residential)

The location of the 217 services in Queensland is shown in six maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and case management
- residential
- non-residential

Map 4: Counselling
- residential
- non-residential

Map 5: Information and education
- residential
- non-residential

Map 6: Assessment only
- residential
- non-residential

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 to 6.

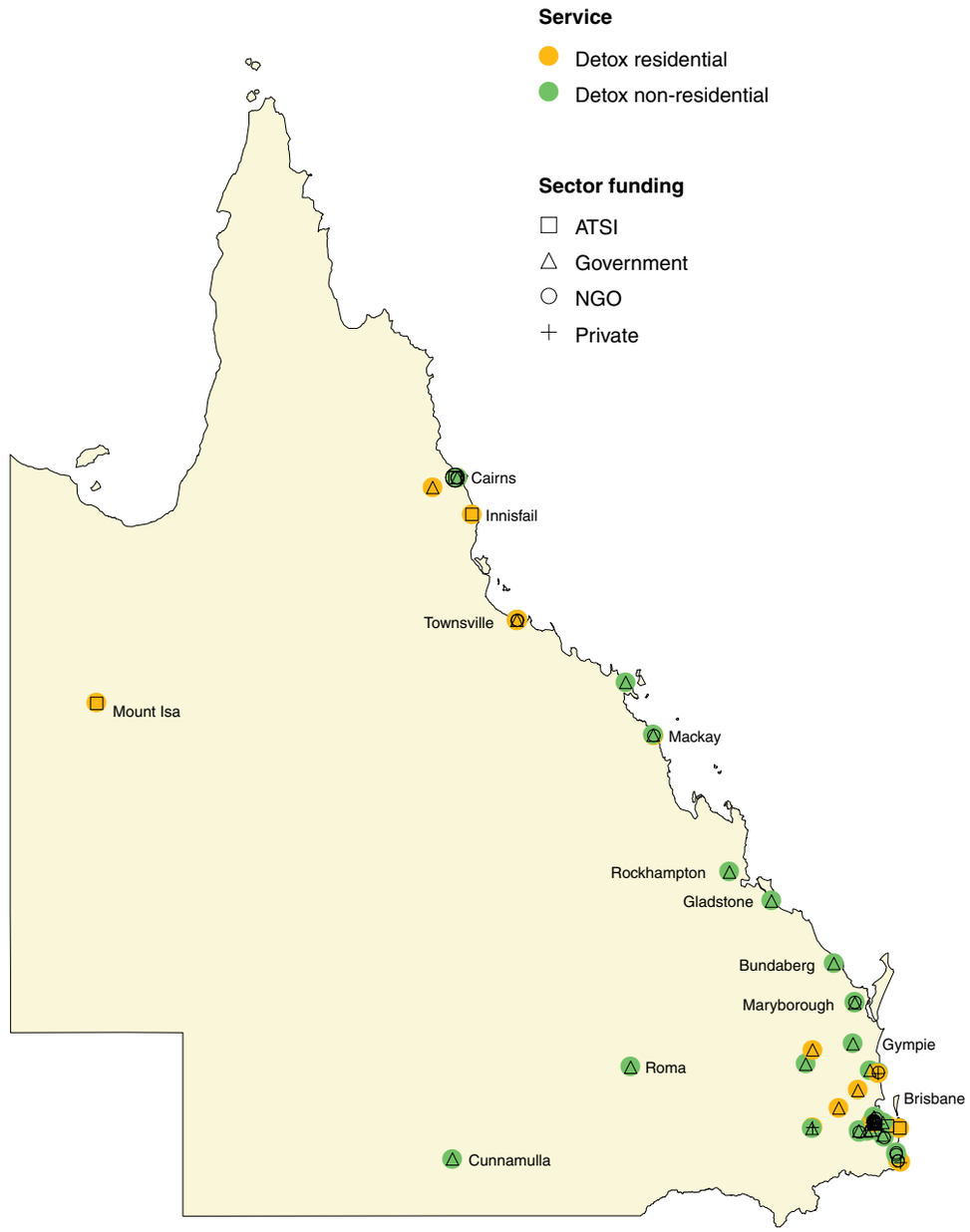
Sectors are indicated by these symbols:

□ Aboriginal and Torres Strait Islander services

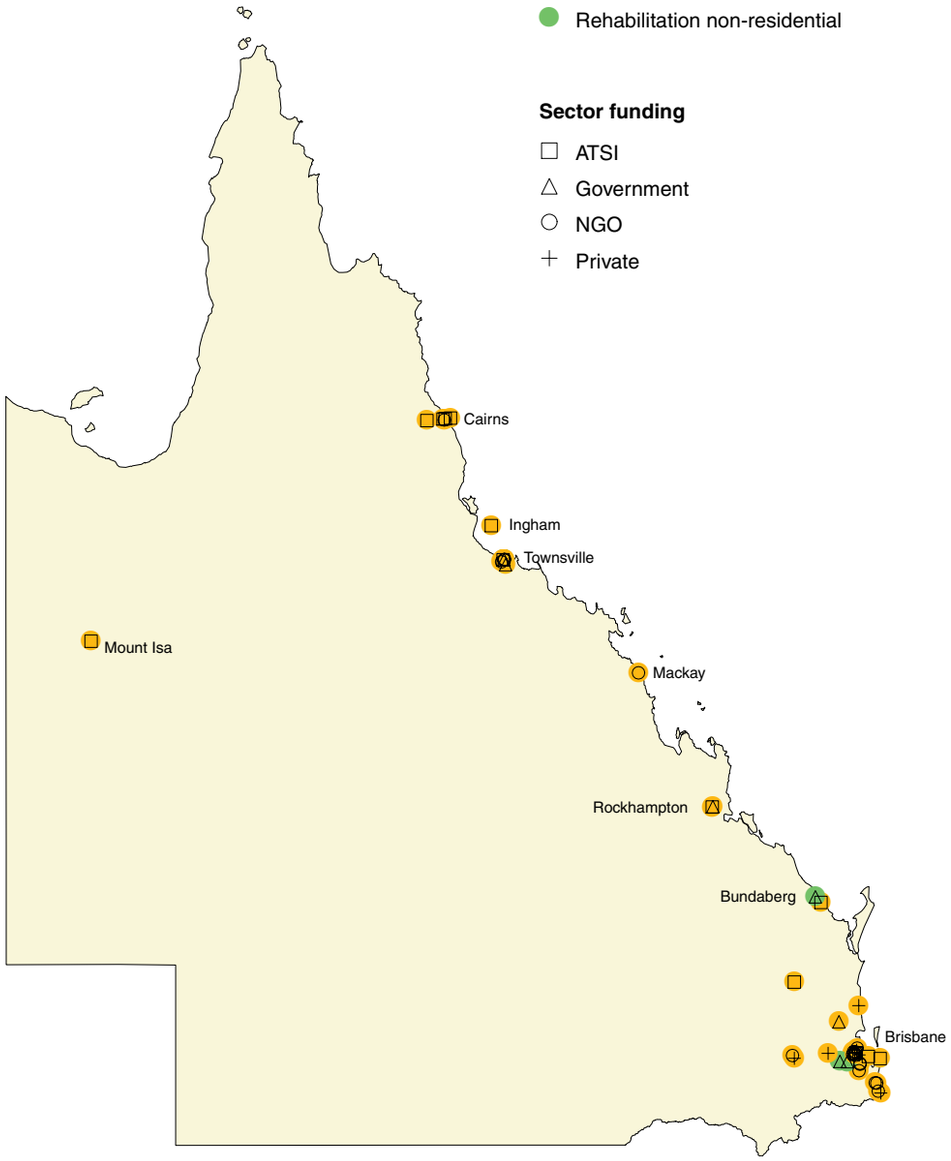
△ Public sector government services

○ Non-government organisations

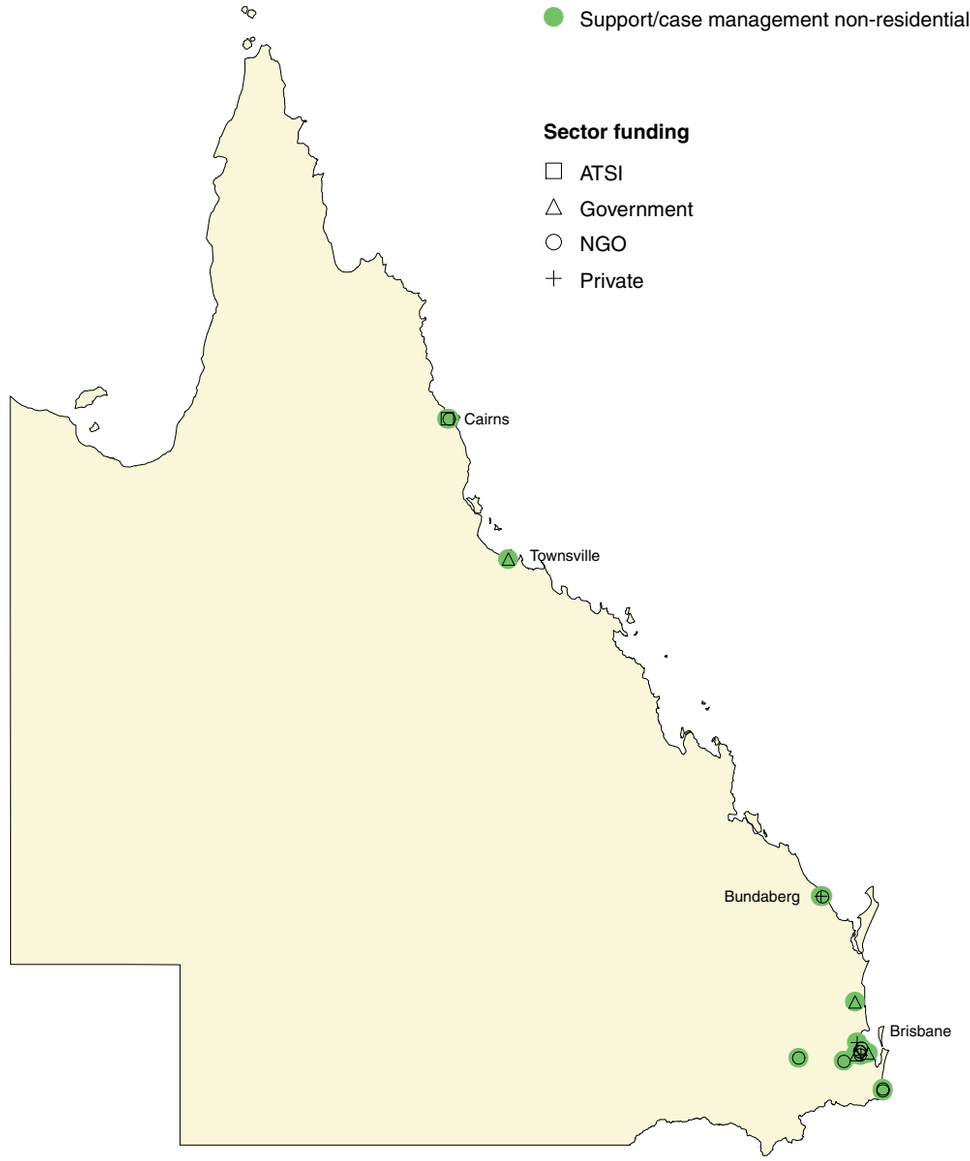
+ Private providers



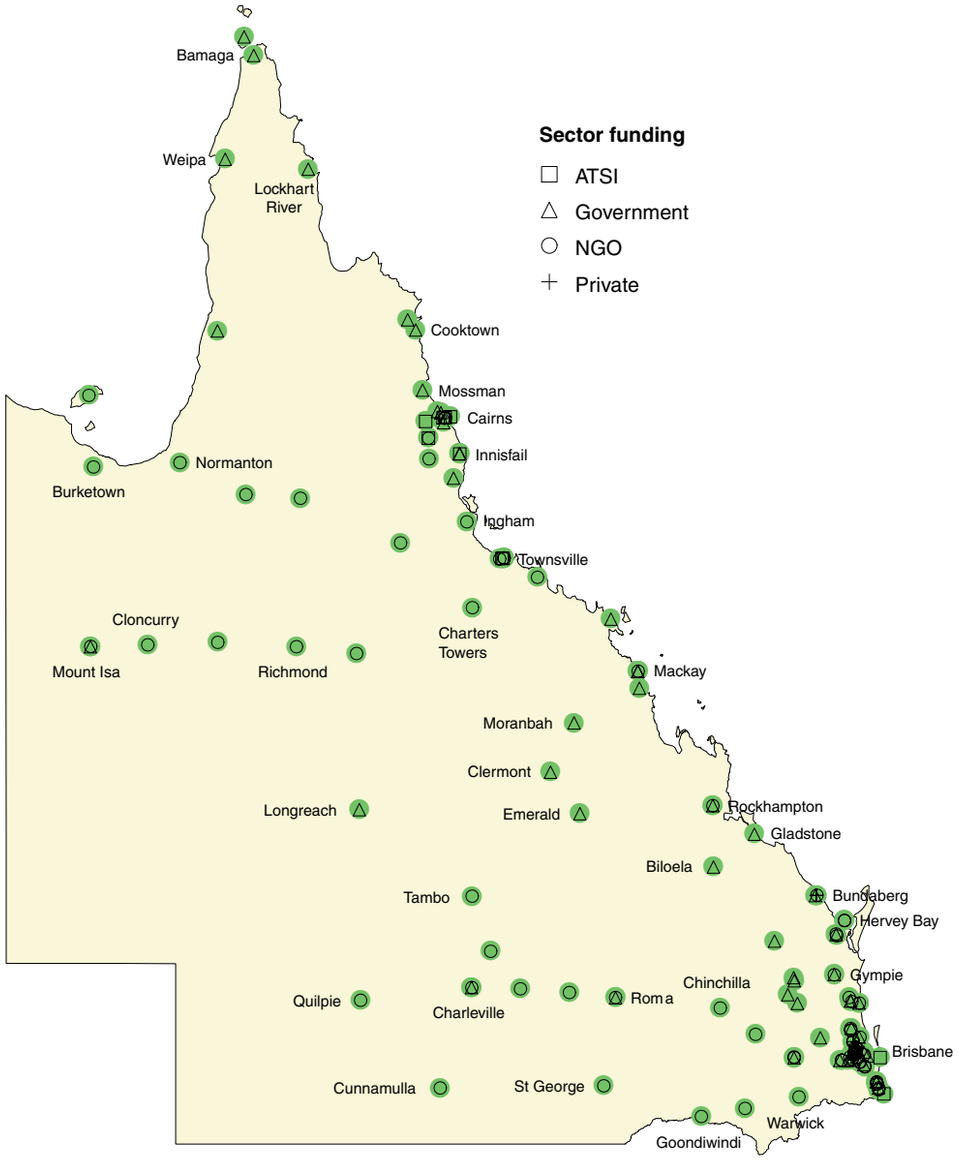
Map 1: Location of detox treatment services by sector funding, Queensland, 2002–2004



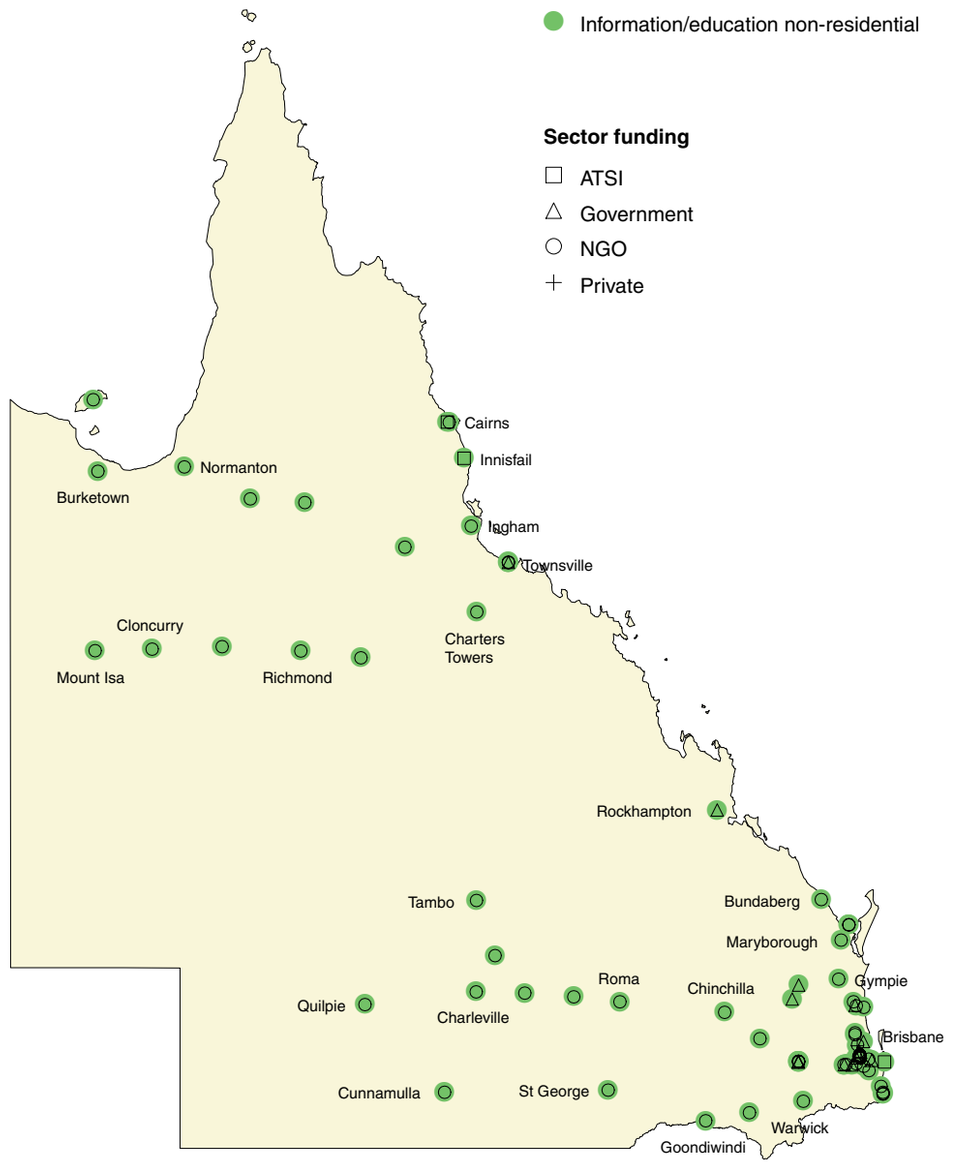
Map 2: Location of rehabilitation treatment services by sector funding, Queensland, 2002–2004



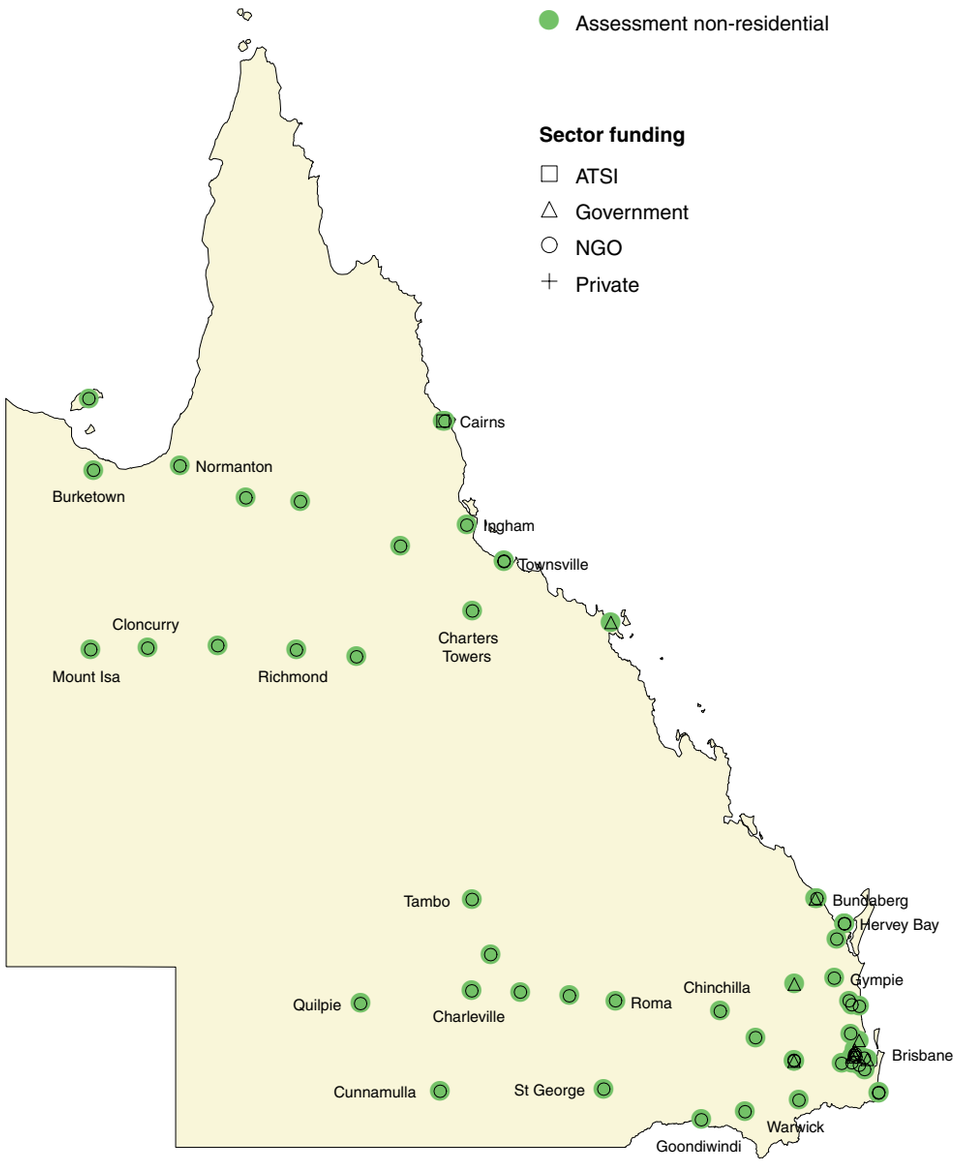
Map 3: Location of support/case management services by sector funding, Queensland, 2002–2004



Map 4: Location of counselling treatment services by sector funding, Queensland, 2002–2004



Map 5: Location of information/education services by sector funding, Queensland, 2002–2004



Map 6: Location of assessment services by sector funding, Queensland, 2002–2004

South Australia maps

Detoxification is offered by 11 services (6 residential and 5 non-residential)

Rehabilitation is offered by 10 services (3 residential and 7 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 7 services (1 residential and 6 non-residential)

Counselling is offered by 66 services (9 residential and 57 non-residential)

Support and case management is offered by 49 services (6 residential and 43 non-residential)

Information and education is offered by 74 services (8 residential and 66 non-residential)

Assessment only is offered by 54 services (3 residential and 51 non-residential)

Other treatment services are offered by 6 services (all non-residential)

The location of the 88 services in South Australia is shown in four maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and Counselling
- support (non-residential)
- counselling (non-residential)
- both support and counselling (non-residential)

Map 4: Information and assessment
- information (non-residential)
- assessment (non-residential)
- both information and assessment (non-residential)

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 and 4.

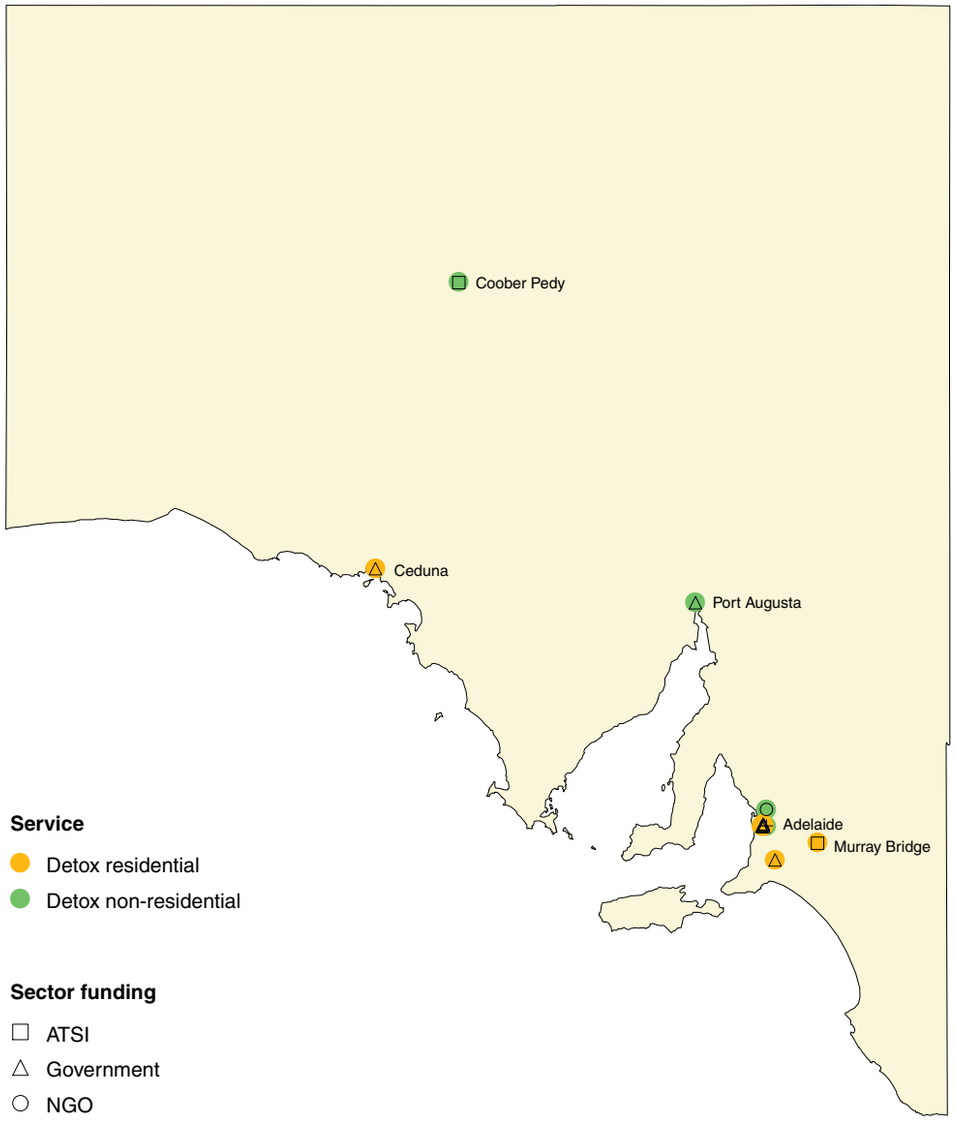
Sectors are indicated by these symbols:

□ Aboriginal and Torres Strait Islander services

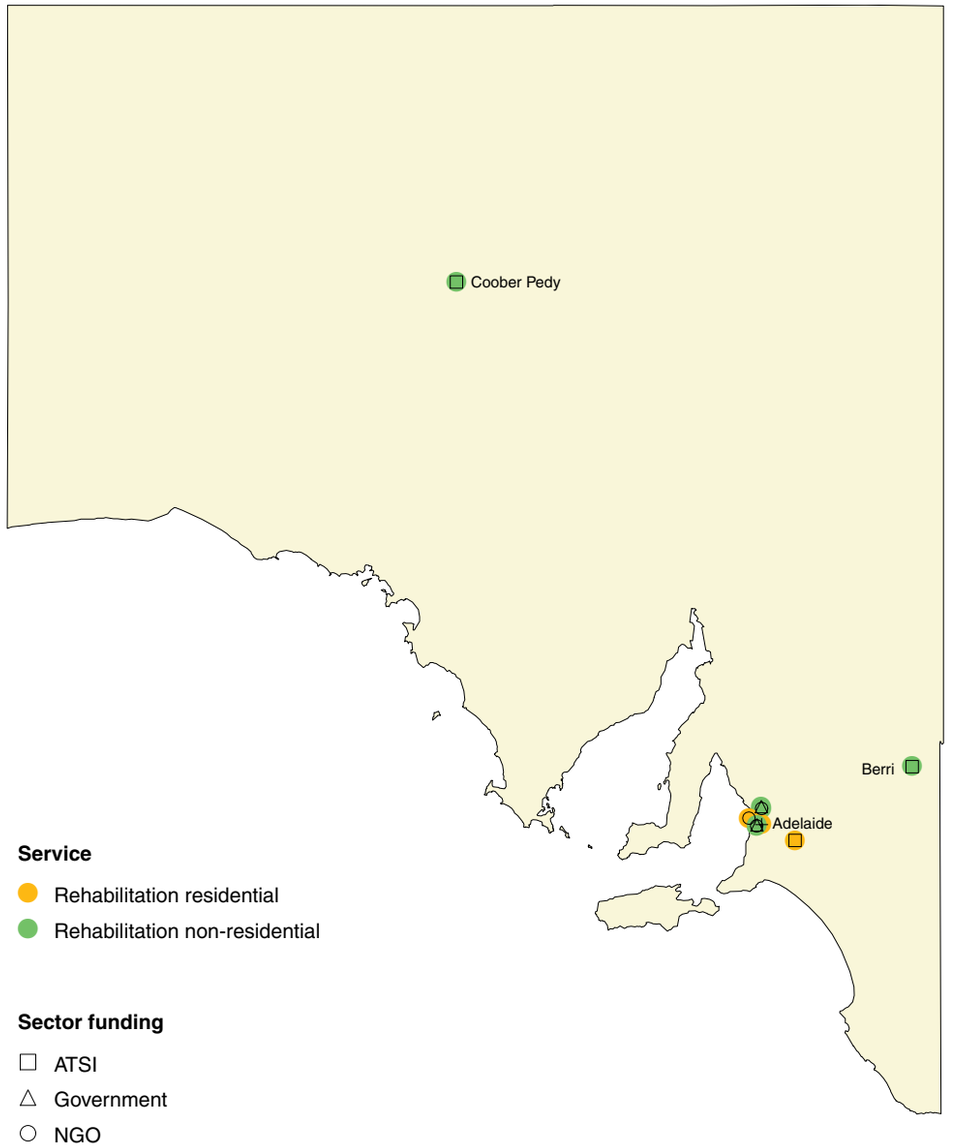
△ Public sector government services

○ Non-government organisations

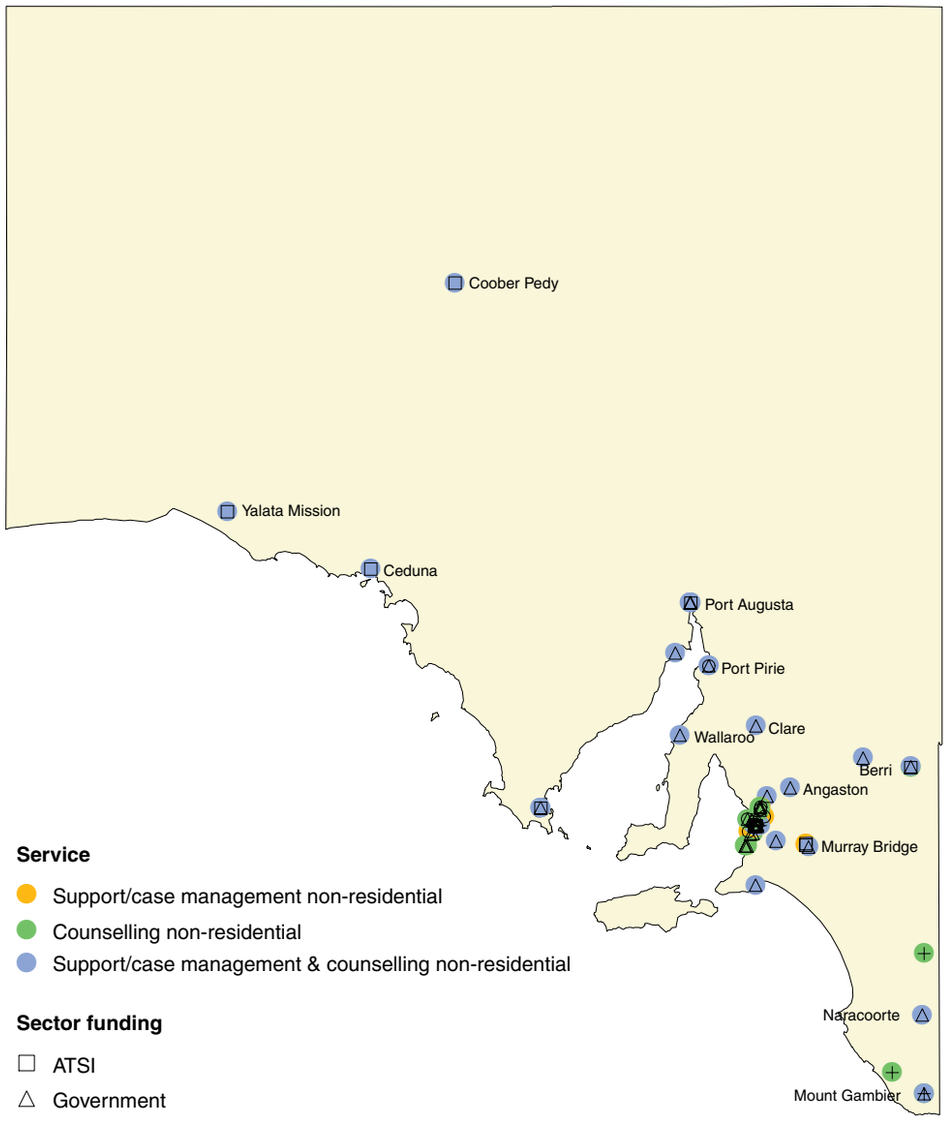
+ Private providers



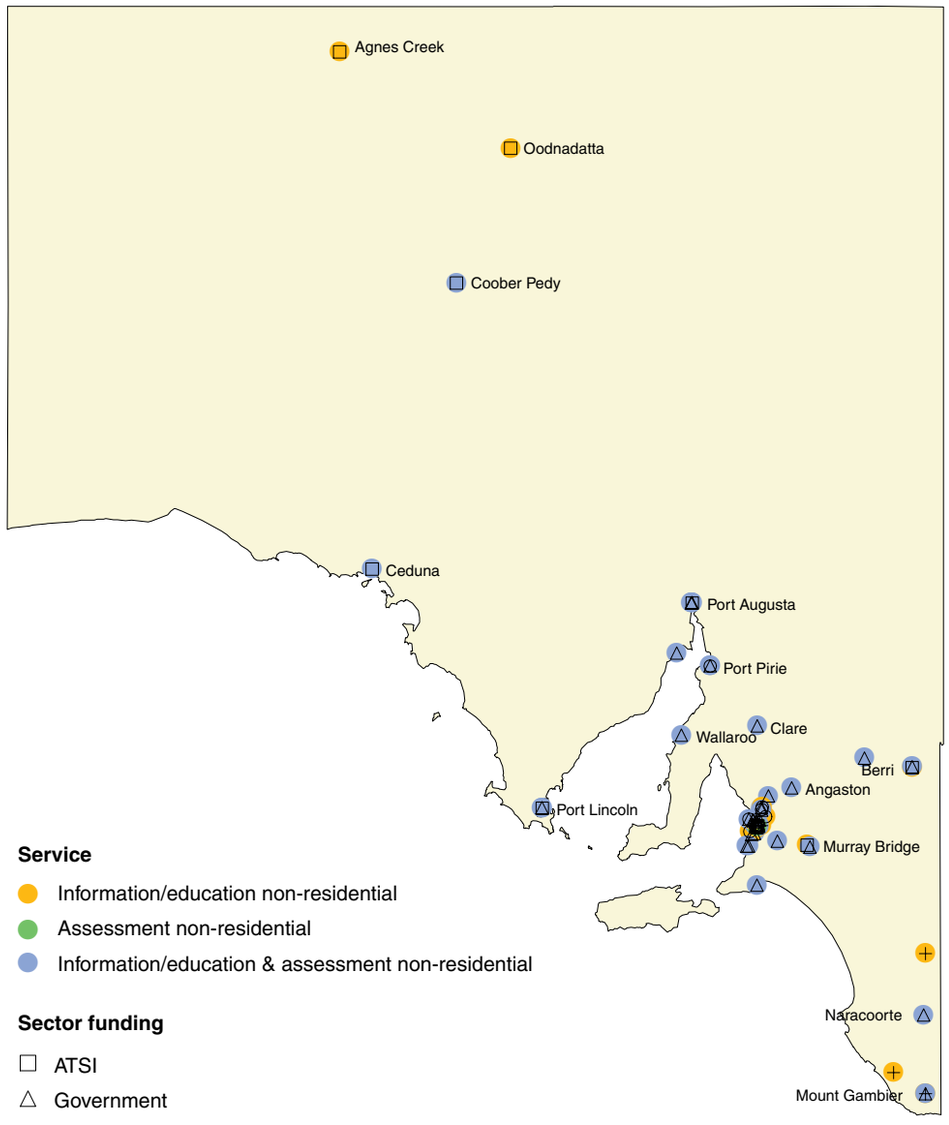
Map 1: Location of detox treatment services by sector funding, South Australia, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, South Australia, 2002–2004



Map 3: Location of support/case management and counselling treatment services by sector funding, South Australia, 2002–2004



Map 4: Location of information/education and assessment services by sector funding, South Australia, 2002–2004

Tasmania maps

Detoxification is offered by 15 services (3 residential and 12 non-residential)

Rehabilitation is offered by 5 services (2 residential and 3 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 20 services (1 residential and 19 non-residential)

Counselling is offered by 33 services (6 residential and 27 non-residential)

Support and case management is offered by 27 services (2 residential and 25 non-residential)

Information and education is offered by 9 services (3 residential and 6 non-residential)

Assessment only is offered by 30 services (4 residential and 26 non-residential)

Other treatment services are offered by 17 services (all non-residential)

The location of the 35 services in Tasmania is shown in four maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and Counselling
- support (non-residential)
- counselling (non-residential)
- both support and counselling (non-residential)

Map 4: Information and assessment
- information (non-residential)
- assessment (non-residential)
- both information and assessment (non-residential)

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 and 4.

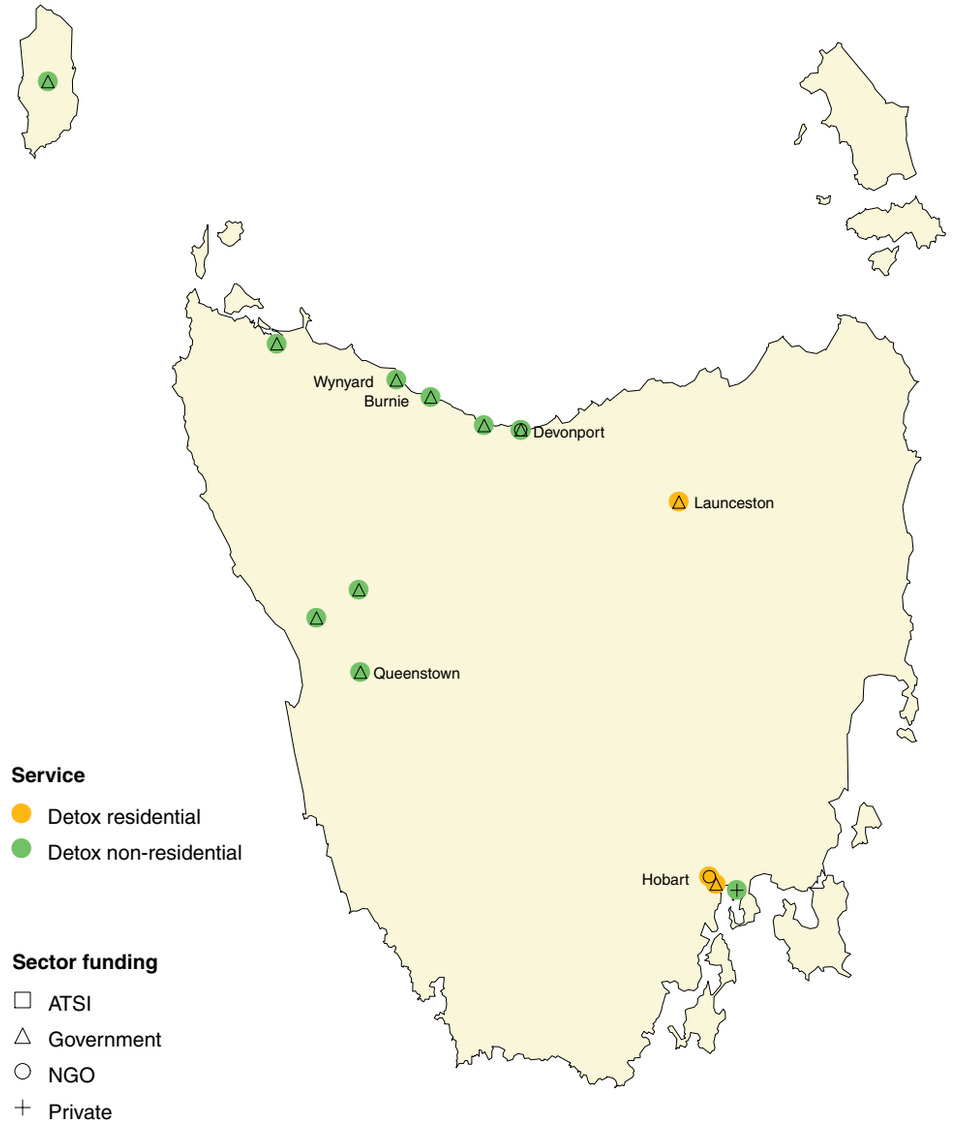
Sectors are indicated by these symbols:

☐ Aboriginal and Torres Strait Islander services

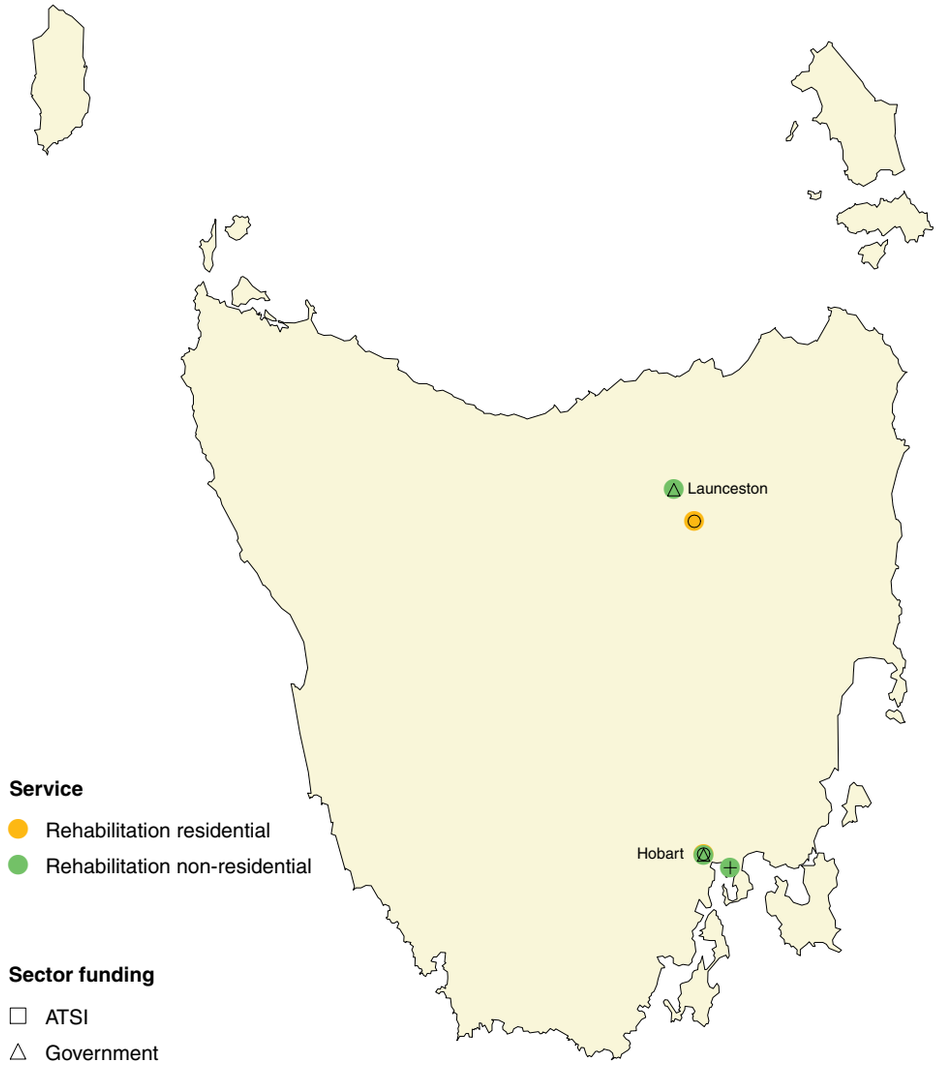
△ Public sector government services

○ Non-government organisations

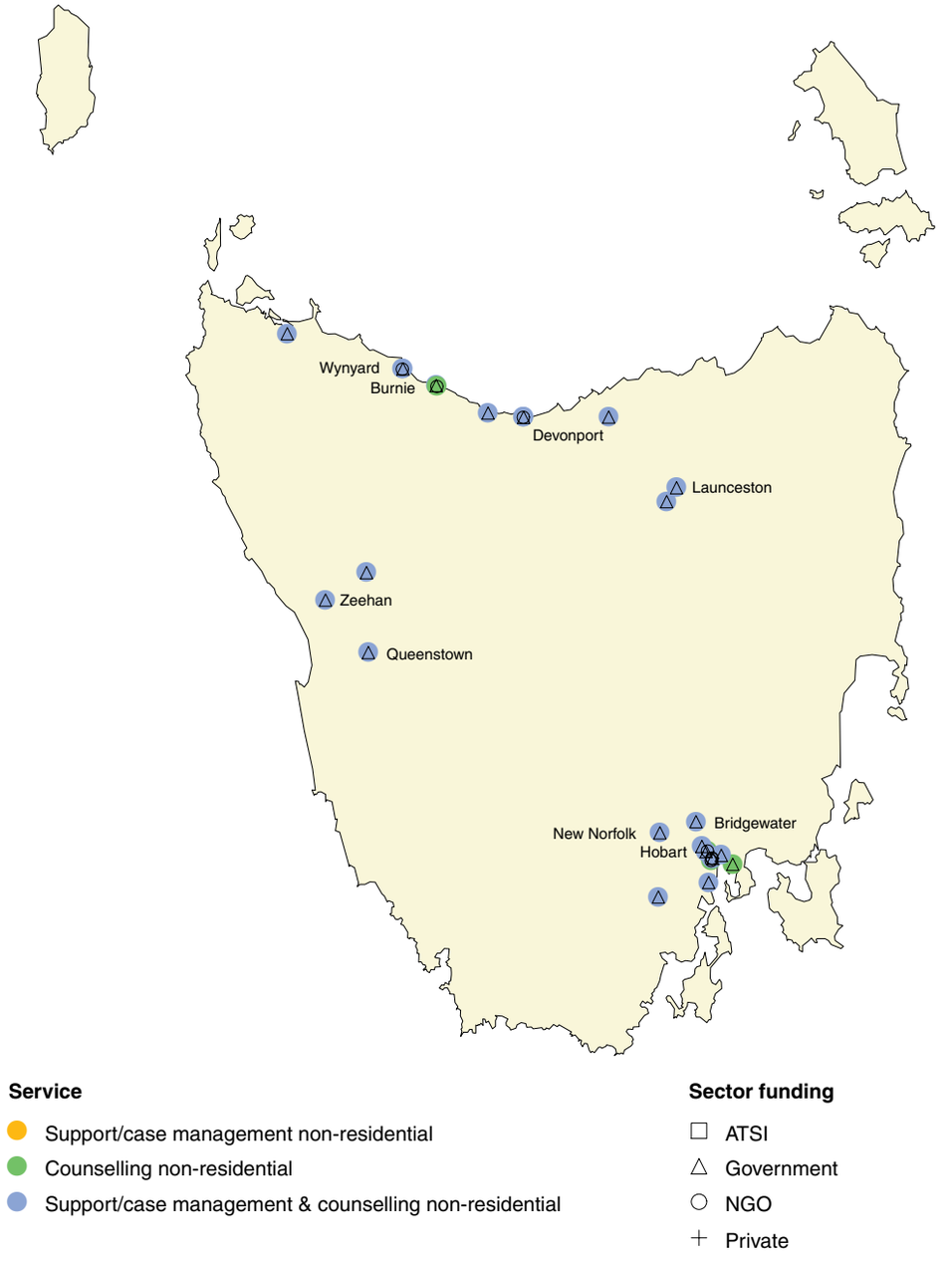
\+ Private providers



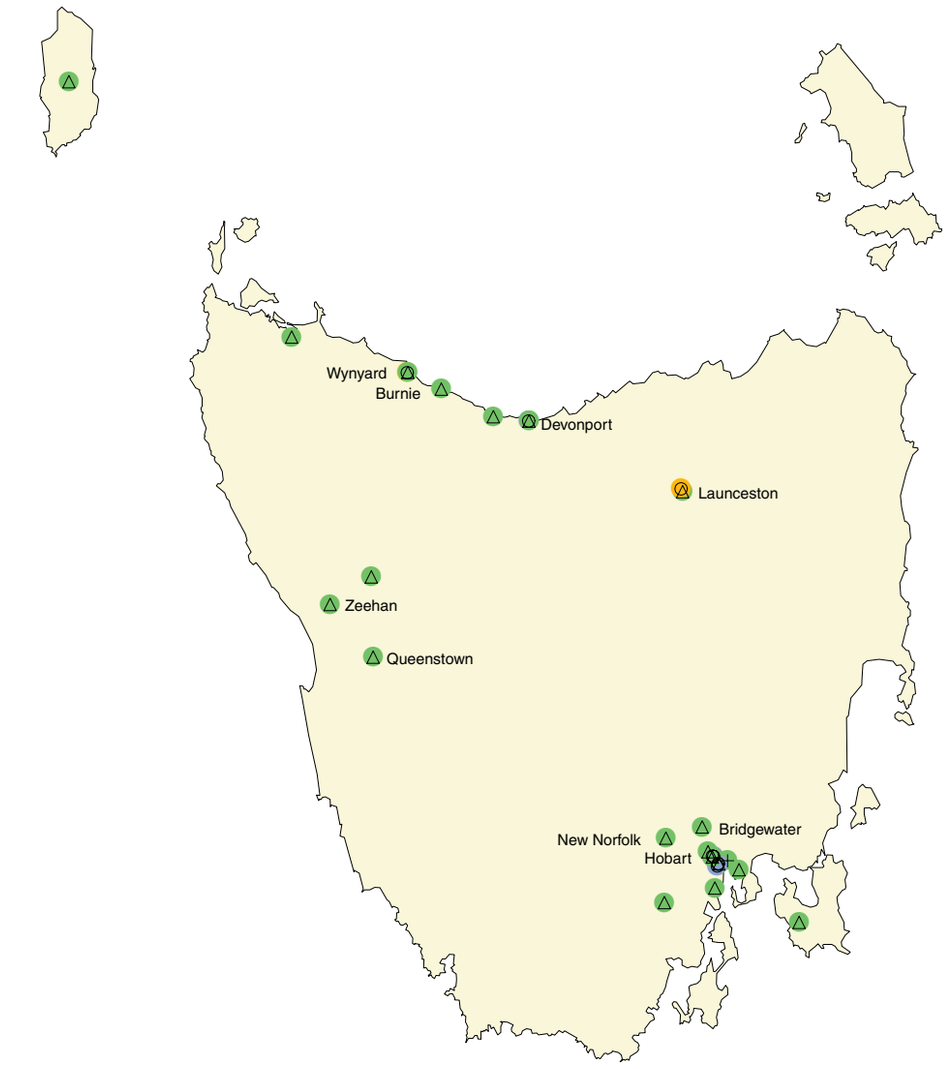
Map 1: Location of detox treatment services by sector funding, Tasmania, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, Tasmania, 2002–2004



Map 3: Location of support/case management and counselling treatment services by sector funding, Tasmania, 2002–2004



Map 4: Location of information/education and assessment services by sector funding, Tasmania, 2002–2004

Victoria maps

Detoxification is offered by 96 services (34 residential and 62 non-residential)

Rehabilitation is offered by 91 services (39 residential and 52 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 61 services (18 residential and 43 non-residential)

Counselling is offered by 193 services (33 residential and 160 non-residential)

Support and case management is offered by 147 services (26 residential and 121 non-residential)

Information and education is offered by 138 services (19 residential and 119 non-residential)

Assessment only is offered by 130 services (15 residential and 115 non-residential)

Other treatment services are offered by 21 services (4 residential and 17 non-residential)

The location of the 224 services in Victoria is shown in six maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and case management
- residential
- non-residential

Map 4: Counselling
- residential
- non-residential

Map 5: Information and education
- residential
- non-residential

Map 6: Assessment only
- residential
- non-residential

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 to 6.

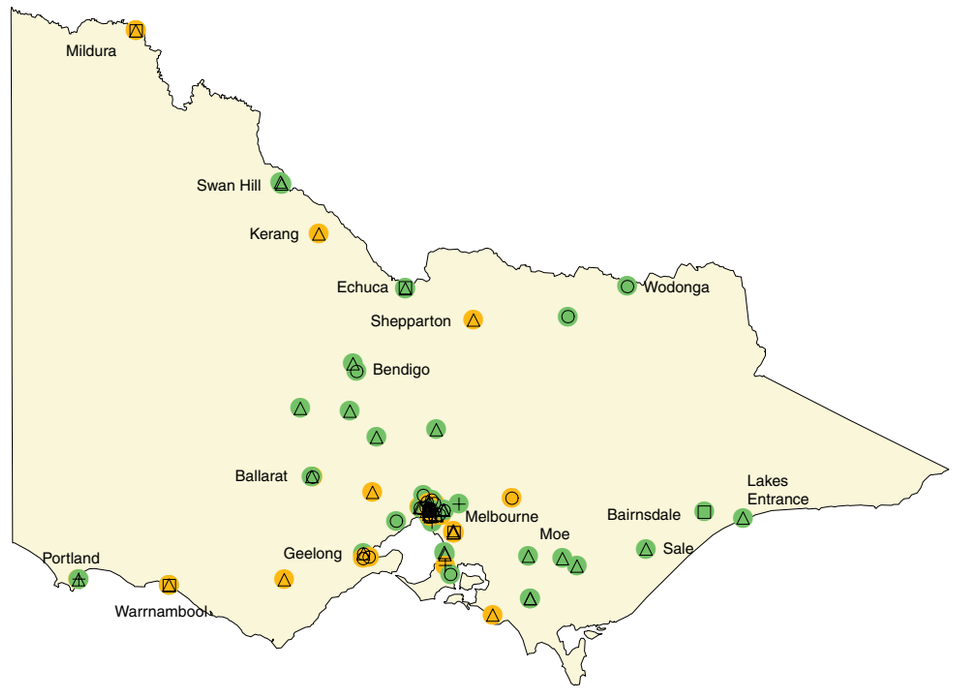
Sectors are indicated by these symbols:

☐ Aboriginal and Torres Strait Islander services

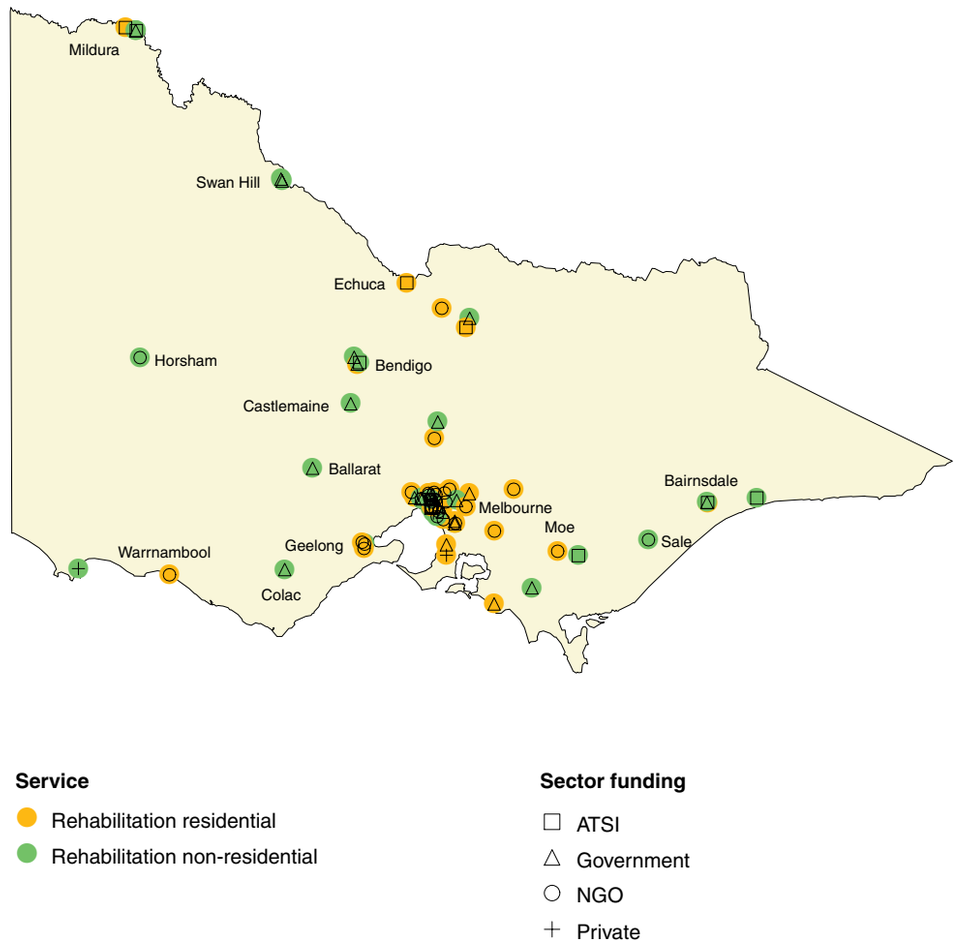
△ Public sector government services

○ Non-government organisations

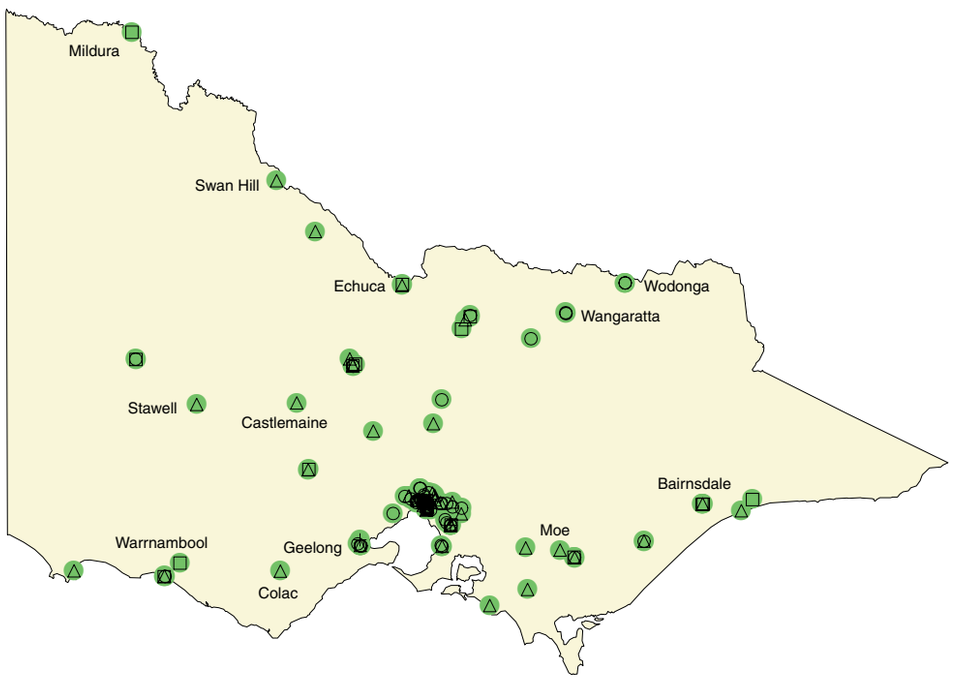
\+ Private providers



Map 1: Location of detox treatment services by sector funding, Victoria, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, Victoria, 2002–2004



Service

- Support/case management non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 3: Location of support/case management services by sector funding, Victoria, 2002–2004

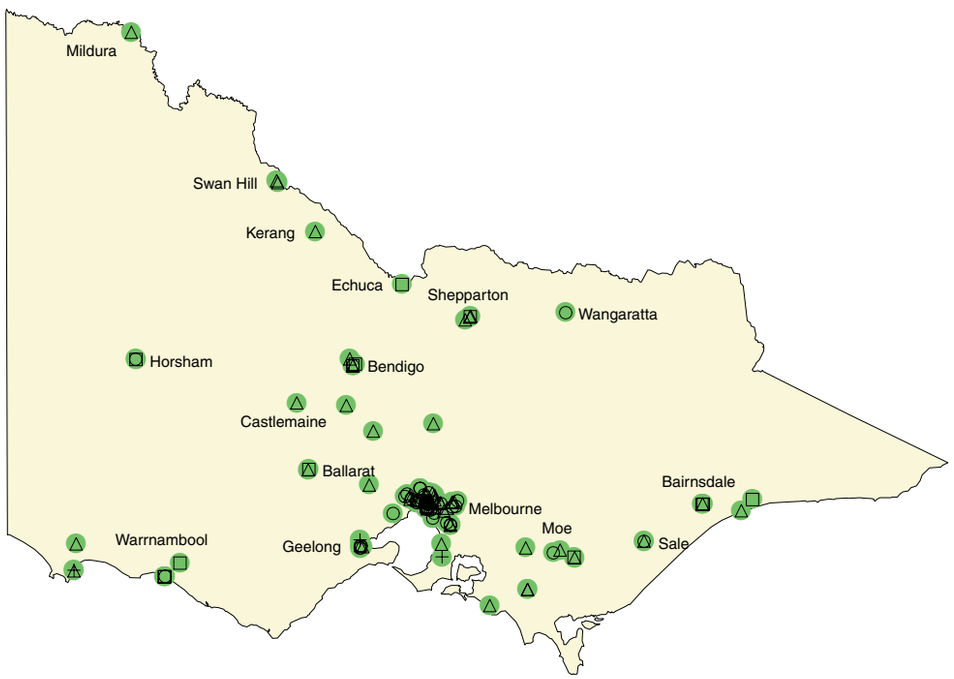
Service

- Counselling non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 4: Location of counselling treatment services by sector funding, Victoria, 2002–2004



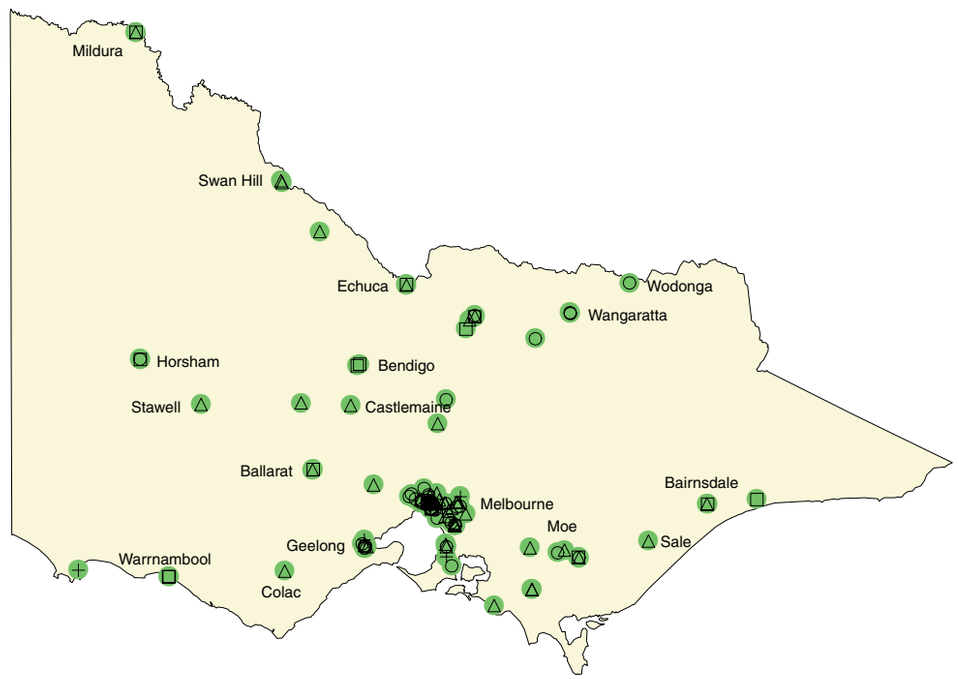
Service

- Information/education non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 5: Location of information/education services by sector funding, Victoria, 2002–2004



Service

- Assessment non-residential

Sector funding

- ATSI
- Government
- NGO
- Private

Map 6: Location of assessment services by sector funding, Victoria, 2002–2004

Western Australia maps

Detoxification is offered by 29 services (15 residential and 14 non-residential)

Rehabilitation is offered by 42 services (16 residential and 26 non-residential)

Pharmacotherapy (not including individual prescribers) is offered by 6 services (2 residential and 4 non-residential)

Counselling is offered by 79 services (16 residential and 63 non-residential)

Support and case management is offered by 59 services (8 residential and 51 non-residential)

Information and education is offered by 60 services (11 residential and 49 non-residential)

Assessment only is offered by 40 services (7 residential and 33 non-residential)

Other treatment services are offered by 34 services (5 residential and 29 non-residential)

The location of the 130 services in Western Australia is shown in four maps:

Map 1: Detoxification
- residential
- non-residential

Map 2: Rehabilitation
- residential
- non-residential

Map 3: Support and Counselling
- support (non-residential)
- counselling (non-residential)
- both support and counselling (non-residential)

Map 4: Information and assessment
- information (non-residential)
- assessment (non-residential)
- both information and assessment (non-residential)

Please note: Ancillary counselling, support, information, and assessment are offered in many residential detoxification or rehabilitation services, and are not represented by separate icons on Maps 3 and 4.

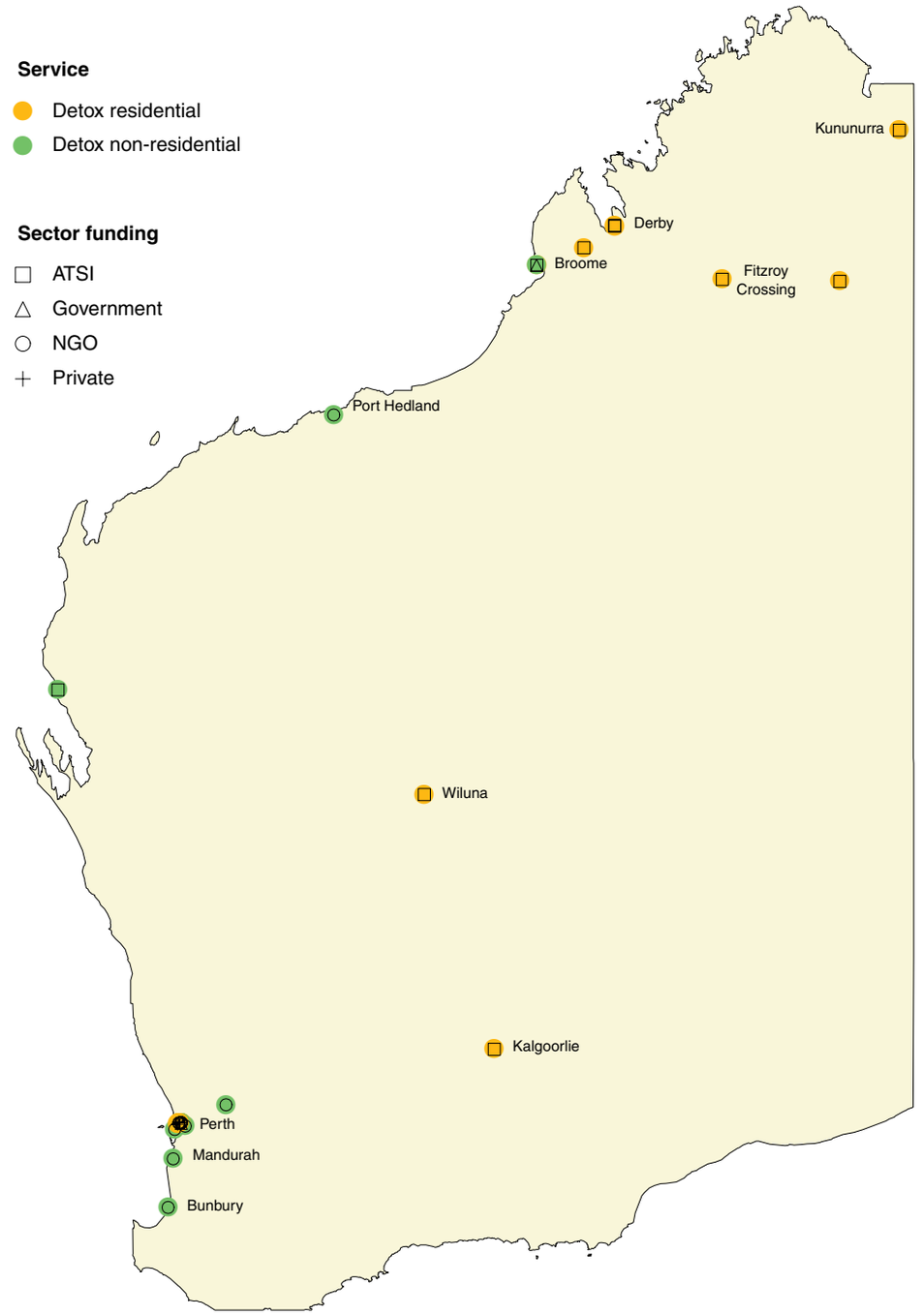
Sectors are indicated by these symbols:

□ Aboriginal and Torres Strait Islander services

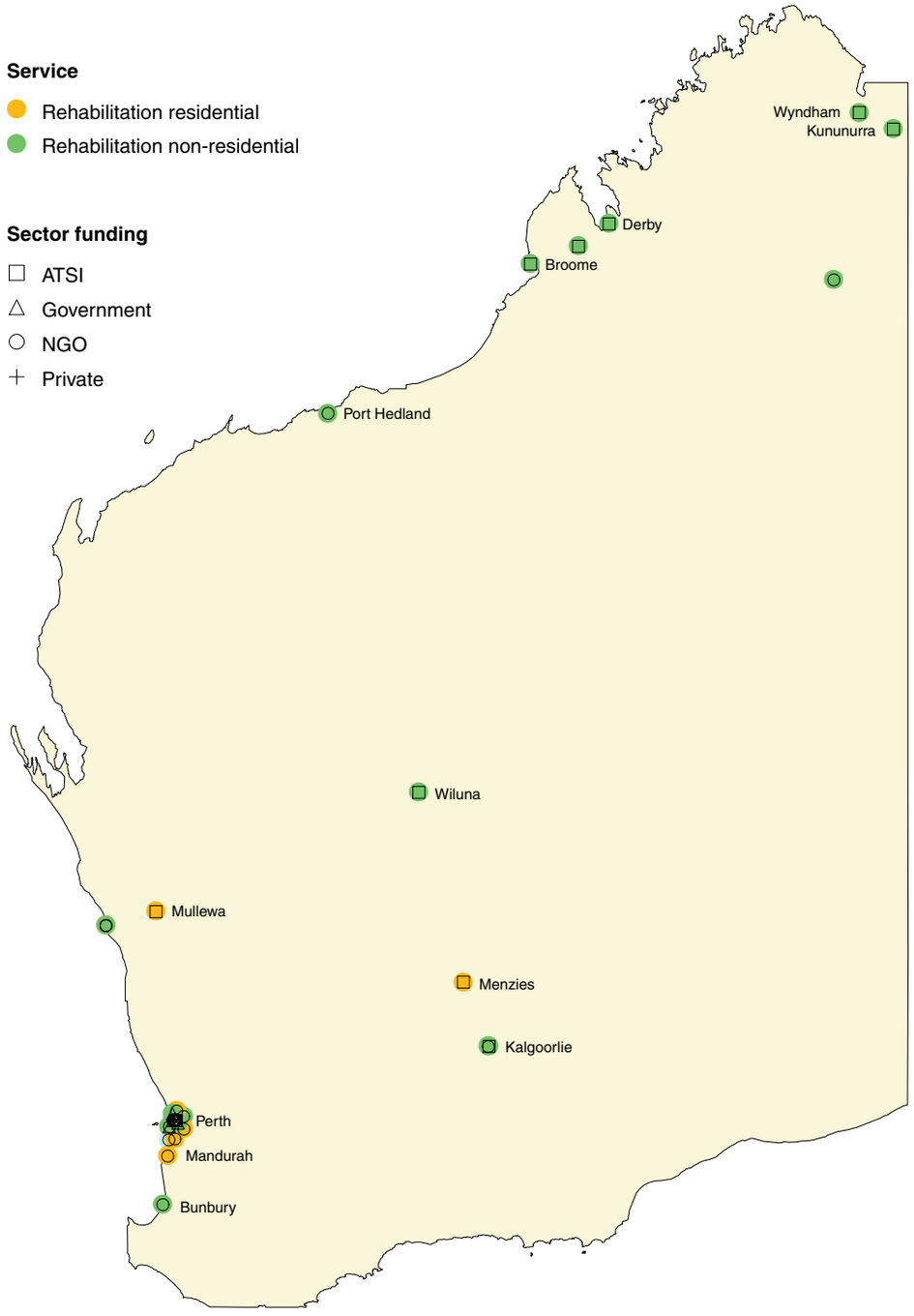
△ Public sector government services

○ Non-government organisations

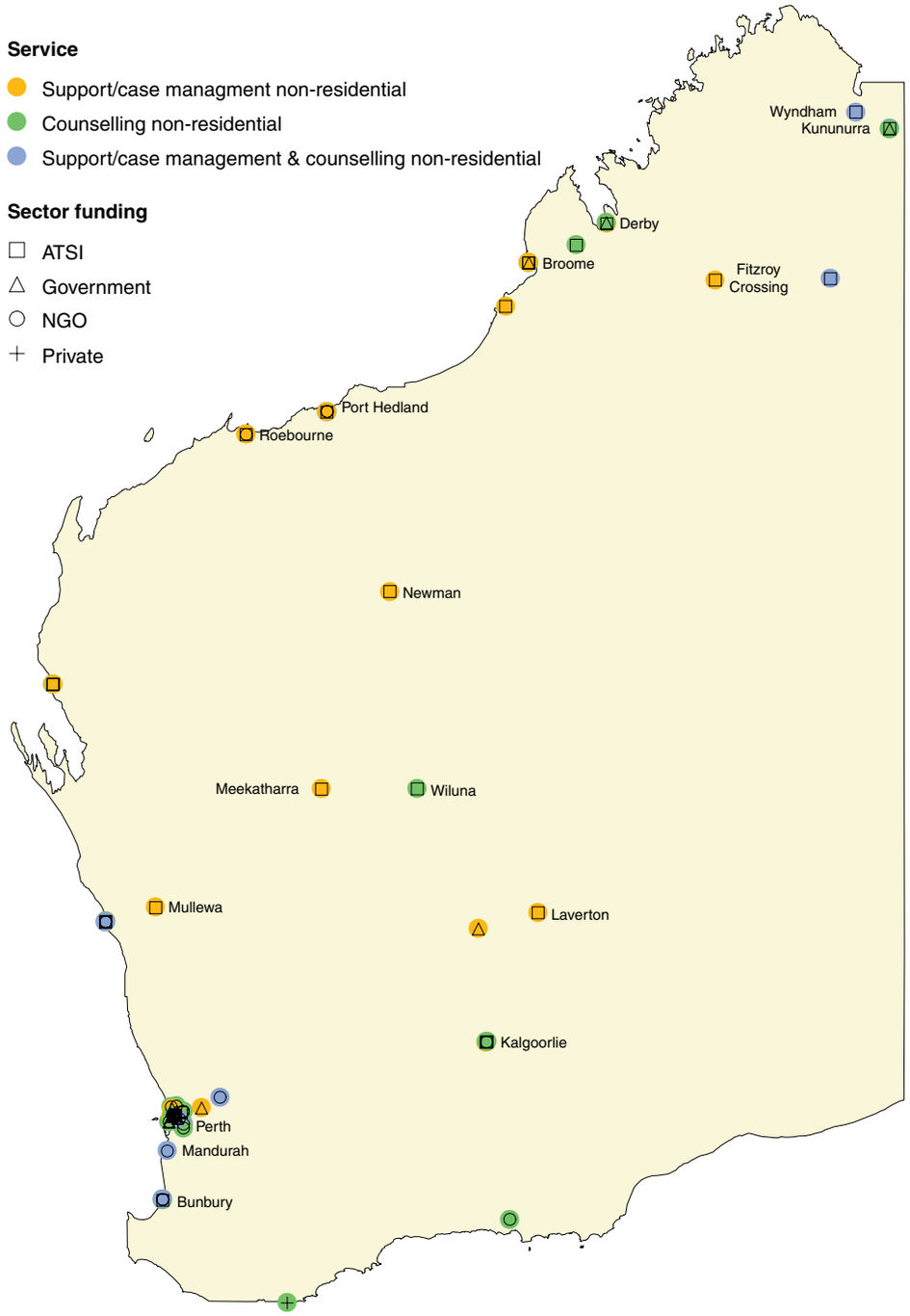
+ Private providers



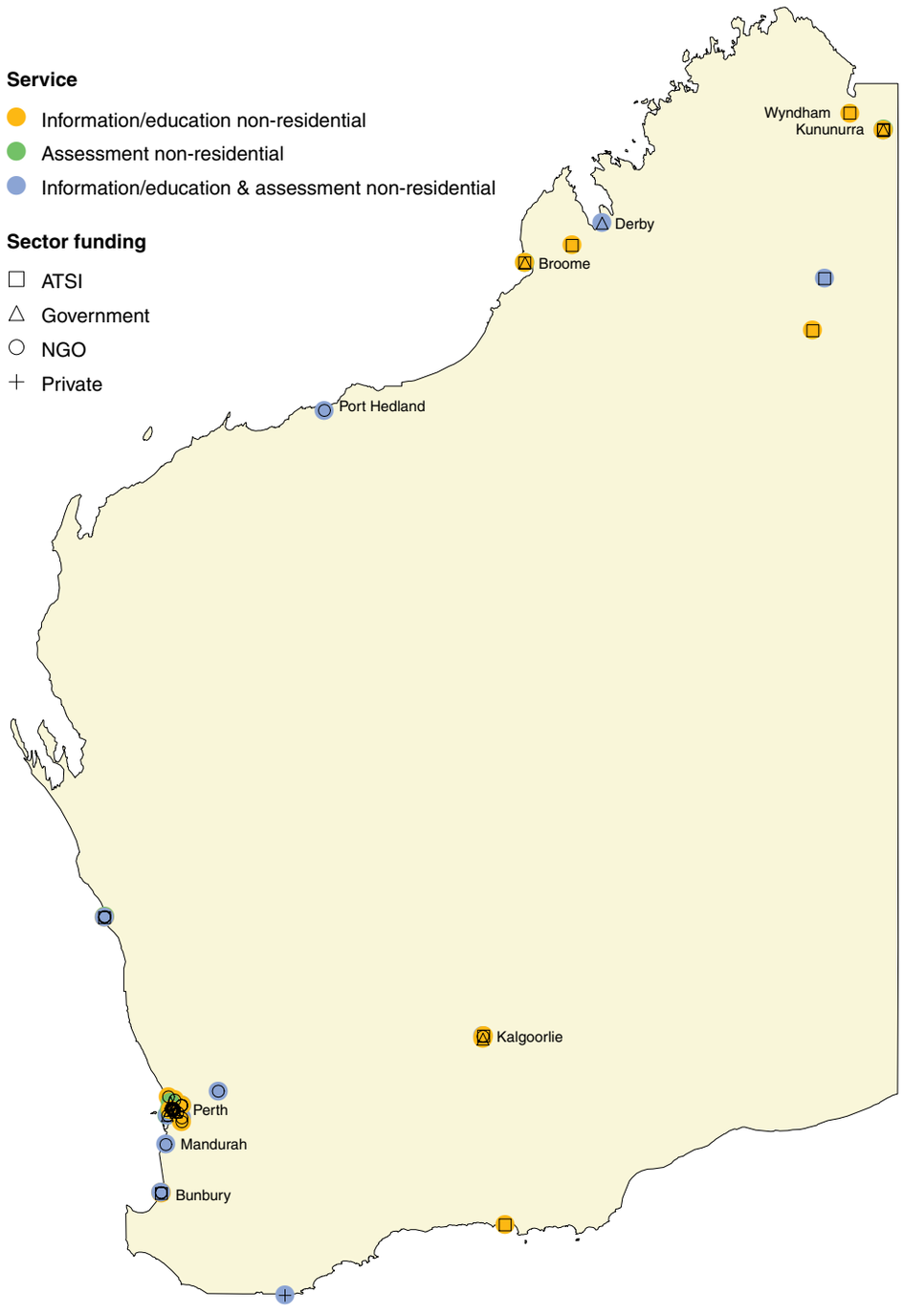
Map 1: Location of detox treatment services by sector funding, Western Australia, 2002–2004



Map 2: Location of rehabilitation treatment services by sector funding, Western Australia, 2002–2004



Map 3: Location of support/case management and counselling treatment services by sector funding, Western Australia, 2002–2004



Map 4: Location of information/education and assessment services by sector funding, Western Australia, 2002–2004

Appendix 5: Acronyms

ANCD	The Australian National Council on Drugs
ABS	Australian Bureau of Statistics
ACG	Adjusted clinical group
ACT	American College Testing Program
AIHW	Australian Institute of Health and Welfare
AOD	Alcohol and other drugs
AODD	Alcohol and other drug dependence
AODTS	Alcohol and other drug treatment services
AODTS-NMDS	Alcohol and other drug treatment services – National Minimum Dataset (AIHW)
ASNI	ATOD-Specific Needs Index
ATOD	Alcohol, tobacco and other drugs
CEA	Cost-effectiveness analysis
CMA	Cost-minimisation analysis
COTSA	Clients Of Treatment Service Agencies survey
CPN	Community psychiatric nurse
CRG	Clinical risk group
CUA	Cost-utility analysis
DCG	Diagnostic cost groups
DIS	Diagnostic interview schedule
DRG	Diagnosis related groups
DUF	Drug use forecasting (U.S.)
ECA	Epidemiologic Catchment Area
EDOCC	Socio-economic index of education achieved and occupational status (ABS)
GNI	Generic need index
IDU	Injecting drug use
IGCD	Intergovernmental Committee on Drugs
IMP	Integrated care pathway
LGA	Local government area
LONCA	Level of need care assessment

MCDS	Ministerial Council on Drug Strategy
NADA	Network of Alcohol and Drug Agencies Inc (NSW)
NATSIHC	National Aboriginal and Torres Strait Islander Health Council
NDARC	National Drug and Alcohol Research Centre (UNSW)
NDRI	National Drug Research Institute (Curtin University)
NHS	National Health Service (UK)
NHSDA	National Household Survey of Drug Use (U.S.)
NICE	National Institute for Clinical Evidence (UK)
NMDS	(National Minimum Dataset) – see AODTS-NMDS
NTA	National Treatment Agency for Substance Misuse (UK)
PBMA	Program budgeting and marginal analysis
PHC RIS	Primary Health Care Research and Information Service
QALY	Quality-adjusted life years
RAF	Resource allocation formula
RDF	Rural Development Fund
RNAS	Relative needs assessment scale
RUG	Resource utilisation group
RUR	Rural status index
SDS	Social Dysfunction Scale
SMR	Standardised mortality ratio

Appendix 6: Bibliography and references

Ad Hoc Committee on Health Literacy AMA (1999). Health Literacy: Report of the Council of Scientific Affairs. *JAMA* 281: 552–557.

Alderman N, Dawson K, Rutterford NA, Reynolds PJ (2001). A comparison of the validity of self report measures amongst people with acquired brain injury: A preliminary study of the usefulness of EuroQoL-5D. *Neuropsychological rehabilitation* 11(5): 529–537.

Almond P (2002). An analysis of the concept of equity and its application to health visiting. *Journal of Advanced Nursing* 37(6): 598–606.

Ament A, Baltussen R (1997). The interpretation of results of economic evaluation: explicating the value of health. *Health Economics* 6(6): 625–635.

Amey C, Albrecht S (1998). Race and ethic differences in adolescent drug use: The impact of family structure and the quantity and quality of parental interaction. *Journal of Drug Issues* 28(2): 283–298.

Andrews G, Henderson S (eds) (2000). *Unmet need in psychiatry: problems, resources, responses.* Cambridge, New York, Melbourne: Cambridge University Press.

Anglin MD, Caulkins JP, Hser YI (1993). Prevalence estimation: policy needs, current status and future potential. *Journal of Drug Issues* 23(2): 345–360.

Antony MM, Barlow DH (eds) (2002). *Handbook of assessment and treatment planning for psychological disorders.* New York: Guilford Publications.

Asthana S, Gibson A, Moon G, Brigham P (2003). Allocating resources for health and social care: the significance of rurality. *Health and Social Care in the Community* 11(6) 486–493.

Asthana S, Gibson A, Moon G, Dicker J, Brigham P (2004). The pursuit of equity in NHS resource allocation: should morbidity replace utilisation as the basis for setting health care capitations? *Social Science and Medicine* 58: 539–551.

Australian Bureau of Statistics (1997). *Aspects of Literacy: Profiles and perceptions, Australia 1996* and *Assessed skills levels Australia 1996.* ABS Catalogue Nos. 4226.0 and 4228.0. Canberra: ABS.

Barak Y, Szor H, Kimhi R, Kam E, Mester R, Elizur A (2001). Survey of patient satisfaction in adult psychiatric outpatient clinics. *European Psychiatry* 16(2): 131–133.

Beale NR, Taylor GJ, Straker-Cook DM (2002). Is council tax valuation band a predictor of mortality? *BMC Public Health.* 2(1): 17.

Bindman J, Glover G, Goldberg D, Chisholm D (2000). Expenditure on mental health care by English health authorities: a potential cause of inequity. *British Journal of Psychiatry* 177: 267–274.

Bindman J, Tighe J, Thornicroft G, Leese M (2002). Poverty, poor services, and compulsory psychiatric admission in England. *Social Psychiatry and Psychiatric Epidemiology* 37(7): 341–345.

Blume S, Belfer M, Gill DJ, Ling W, Stephens PS (1995). *Psychiatric services for addicted patients: A task force report of the American Psychiatric Association.*

Bogwald K (2001). Do patients and their therapists agree on the content of treatments? *Journal of Nervous and Mental Disease* 189(12): 830–837.

Bracke P (2001). Measuring the subjective well-being of people in a psychosocial rehabilitation center and a residential psychiatric setting: The outline of the study and the measurement properties of a multidimensional indicator of well-being. *Psychiatric Rehabilitation Journal* 24(3): 222–236.

Bray RM, Wheeless SC, Kroutil LA (1996). Aggregating survey data on drug use across household, institutionalized and homeless populations. In: *Health Survey Research Methods Conference Proceedings*, pp. 105–110. Hyattsville, MD: Department of Health and Human Services.

Brenner H, Savitz DA, Jockel KH, Greenland S (1992). Effects of nondifferential exposure misclassification in ecologic studies. *American Journal of Epidemiology,* 135(1): 85–95.

Brown N, Oyebode F (2000). Resource allocation for mental health care. *British Journal of Psychiatry* 176 (March): 299.

Brown RB, McCartney S, Bell L (1995). Why the NHS should abandon the search for the universal outcome measure. *Health Care Analysis* 3(3): 191–195.

Burgess P, Pirkis J, Buckingham B, Burns J, Eagar K, Eckstein G (2003). Adult mental health needs and expenditures in Australia. *Soc Psychiatry Psychiatr Epidemiol* 39: 427–434.

Bury-Maynard D (1999). Developing a utility index for substance abuse: theory and application. Dissertation Abstracts International, A *The Humanities and Social Sciences.* 60(6): 2246-A–2247-A.

Callaway M, Hall J (2000). Distributive justice in Medicaid capitation: The evidence from Colorado. *Journal of Behavioral Health Services and Research* 27(1): 87–97.

Camp J, Krakow M, Argeriou M (1992). Substance abuse treatment management information systems; Balancing federal, state, and service provider needs. *Journal of Mental Health Administration* 19(1): 5–20.

Campbell J (2002). How consumers/survivors are evaluating the quality of psychiatric care. *Evaluation Review* 21(3): 357–363.

Carnwath JW, Jeacock J, Huxley P, Davies A, Bowers L (1998). Are all districts equally ready for shared care of drug misusers? *Addiction Research* 6(4): 307–318.

Carr-Hill RA, Hardman G, Martin S, Peacock S, Sheldon TA, Smith P (1994a). *A formula for distributing NHS revenues based on Small Area Use of Hospital Beds.* York: Centre for Economics, University of York.

Carr-Hill RA, Sheldon TA, Smith P, Martin S, Peacock S, Hardman G (1994b). Allocating resources to health authorities: development of method for small area analysis of use of inpatient services. *British Medical Journal* 22; 309(6961): 1046–1049. [See companion article: Smith et al. (1994) below].

Carr-Hill RA, Jamison JQ, O'Reilly D, Stevenson MR, Reid J, Merriman B (2002). Risk adjustment for hospital use using social security data: cross sectional small area analysis. *British Medical Journal* 16 324(7334): 390–399.

Carroll KM, Rounsaville BJ (1992). Contrast of treatmentseeking and untreated cocaine abusers. *Archives of General Psychiatry* 49: 464–471.

Charlesworth M, Gifford S (1992). *Ethics of resource allocation in health discussion, Paper 1: The place of ethics in health care resource allocation. Where to now?* Canberra: Australian Health Ethics Committee Workshop, National Health and Medical Research Council.

Chatterji P, Caffray CM, Jones AS, Lillie-Blanton M, Werthamer L (2001). Applying cost analysis methods to school-based prevention programs: Assessing the economic cost of the ALPHA program. *Prevention Science* 2(1): 45–55.

Chesworth C, Duffy R, Hodnett J, Knight A (2002). Measuring clinical effectiveness in mental health: Is the Canadian Occupational Performance an appropriate measure? *British Journal of Occupational Therapy* 65(1): 30–34.

Chitwood DD, McBride DC, French MT, Comerford M (1999). Health care need and utilization: a preliminary comparison of injection drug users, other illicit drug users, and nonusers. *Substance Use and Misuse* 34: 727–746.

Ciarlo JA, Tweed DL (1992). Implementing indirect needs-assessment models for planning state mental health and substance abuse programs *Evaluation and Program Planning* 15: 195–210.

Commons M, McGuire TG, Riordan MHI (1997). Performance contracting for substance abuse treatment. *Health Services Research* 32(5): 631–650.

Conley R (2001). Evaluating clinical trial data: Outcome measures. *Journal of Clinical Psychiatry* 62(19): 23–28.

Cottler, LB, Zipp, JF, Robins, LN, Spitznagel, EL (1987). Difficult-to-recruit respondents and their effect on prevalence estimates in an epidemiologic survey. *American Journal of Epidemiology* 125, 329–339.

Cramer JA, Rosenheck RA, Xu W, Henderson W, Thomas J, Charney D (2001). Detecting improvement in quality of life and symptomatology in schizophrenia. *Schizophrenia Bulletin* 27(2): 227–234.

Dalton K, Holmes M, Slifkin R (2003). *Findings brief: unpredictable demand and low-volume hospitals.* North Carolina Rural Health Research and Policy Analysis Center. January 2003.

Davies T (2002). Social choice theory and electoral systems. Curriculum outline for May 1–8, 2002. *Symbolic Systems 150*, Stanford University, Palo Alto. http://www.stanford.edu/class/symbsys150/social-choice-theory-5-8.html

Deber R, Sharpe N (1999). One million decisions at the micro-level: patient choice. In *Market Limits in Health Reform. Public success, private failure.* Ch 15. Drache D, Sullivan T, (eds). London and New York: Routledge, 275–291.

Delva J, Neumark Y, Furr CD, Anthony JC (2000). Drug use among welfare recipients in the United States. *American Journal of Drug and Alcohol Abuse* 26(2): 335–342.

Department of Health UK (1999). Drug misuse and dependence: guidelines on clinical management. London: The Stationery Office.

Dermott R (1995). Improving equity and efficiency in the bush: a needs-based method for healthcare resource allocation in remote communities. *Australian Journal of Rural Health* 3: 72–79.

DeWit DJ, Rush B (1996). Assessing the need for substance abuse services: a critical review of needs assessment models. *Evaluation and Program Planning* 19 (1): 41–64.

Dietze P, Rumbold G, Cvetkovski S, Hanlin K, Laslett A, Jonas H (2000). Using population based data on alcohol consumption and related harms to estimate the relative need for alcohol services in Victoria Australia. *Evaluation and Program Planning* 23(4): 429–436.

Dornelas E, Botticello A, Goethe JW, Fischer EH (2001). Validity of a brief measure of post hospital adjustment for psychiatric patients. *Comprehensive Psychiatry* 42(5): 410–415.

Draine J, Salzer M, Culhane D, Hadley T (2002). Poverty, social problems, and serious mental illness. *Psychiatric Services* 53(7): 899.

Duffee D, Carlson B (1996). Competing value premises for the provision of drug treatment to probationers. *Crime and Delinquency* 42(4): 574–592.

Duncan F, Link A (1979). An accountability model for integrating information systems, evaluation mechanisms and decision making processes in alcohol and drug abuse agencies. *Addictive Diseases* 3(4): 517–531.

Dunham RG (1983). The epidemiology of alcohol use and abuse. In Ward, DA (ed). *Alcoholism: Introduction to Theory and Treatment.* Revised 2nd edn. Dubuque, IA: Kendal/Hunt Publishing Co: 90–118.

Eager K (ed.) (1996). *Integrating health outcomes measurement in routine health care conference: proceedings.* Canberra: Australian Health Outcomes Clearing House.

Eaves D (1998). An examination of the concept of equity and the implications for health policy if equity is re-asserted as one of the key government objectives for the National Health Service. *Journal of Nursing Management* 6(4) July, 215–221.

Eckstein G, Gibberd R (1994). *A Relative Health Needs Index for NSW Areas and Districts.* Health Services Research Group, University of Newcastle.

Feldberg G, Vipond R (1999). The virus of consumerism. In *Market Limits in Health Reform. Public success, private failure.* Ch 3. Drache D, Sullivan T (eds). London and New York: Routledge: 48–64.

Field P, Wakerman J (2002). A case study in strategic change: developing a strategic research program to address cardiovascular disease and related disorders in Aboriginal and Torres Strait Islander peoples and rural and remote settings. *Australian Health Review* 25(4): 127–131.

Finlayson M, Baker M, Rodman L, Herzberg G (2002). The process and outcomes of a multimethod needs assessment at a homeless shelter. *American Journal of Occupational Therapy,* 56(3): 313–321.

Flynn PM, Kristiansen PL, Porto JV, Hubbard RL (1999). Costs and benefits of treatment for cocaine addiction in DATOS. *Drug and Alcohol Dependence* 57: 167–174

Ford W, Schmittdiel C (1983). Predicting alcoholism service need from a National Treatment Utilization Survey. *International Journal of the Addictions* 18(8): 1073–1084.

Franz M, Meyer T, Spitznagel A, Schmidt H, Wening K, Gallhofer B (2001). Responsiveness of subjective quality of life assessment in schizophrenic patients: A quasi-experimental pilot study. *European Psychiatry* 16(2): 99–103.

French MT (1995). Economic evaluation of drug abuse treatment programs: methodology and findings. *American Journal of Drug and Alcohol Abuse* 21(1): 111–135.

Friedman S, Stepherson B, Woods J, Des Jarlais DC, Ward TP (1992). Society, drug injectors and AIDS. *Journal of Health Care for the Poor and Underserved* 3(1): 73–89.

Furst, CJ (1983). Estimating alcoholic prevalence. In Furst, CJ (ed.) *Recent Developments of Alcoholism.* New York: Plenum Press: Vol 1, 269–284.

Glover G (1999). How much English health authorities are allocated for mental health care. *British Journal of Psychiatry* 175: 402–406.

Gorman D, Labouvie E (2000). Using social indicators to inform community drug and alcohol prevention policy. *Journal of Public Health Policy* 21(4): 428–446.

Gossop M (1995). The treatment mapping survey. A descriptive study of drug and alcohol treatment responses in 23 countries. *Drug and Alcohol Dependence* 39(1): 7–14.

Gowers S, Levine W, Bailey-Rogers WS, Shore A, Burhouse E (2002). Use of a routine, self-report outcome measure (HoNOSCA-SR) in two adolescent mental services. *British Journal of Psychiatry* 180(3): 266–269.

Gray R, Wykes T, Parr AM, Hails E, Gournay K (2001). The use of outcome measures to evaluate the efficacy and tolerability of antipsychotic medication; A comparison of Thorn graduate and CPN practice. *Journal of Psychiatric and Mental Health Nursing* 8 (3): 191–196.

Grazier K, Eselius L (1999). Mental health carve-outs: Effects and implications. *Medical Care Research and Review* 56 (suppl 2): 37–59.

Gregoire T (2002). The validity of a social indicator approach to substance misuse needs assessment. *Substance Use and Misuse* 37(3): 357–380.

Haaga D (2000). Introduction to the special section on stepped care models in psychotherapy. *Journal of Consulting and Clinical Psychology* 68 (4): 547–548.

Hale R (1996). *Fair Share for Rural Areas: An Assessment of Public Resource Allocation Systems.* Rural Development Commission, Salisbury.

Hanafin S, Houston A, Cowley S (2002). Vertical equity in service provision: a model for the Irish public health nursing service. *Journal of Advanced Nursing* 39(1): 68–76.

Hauck K, Shaw R, Smith PC (2002). Reducing avoidable inequalities in health: a new criterion for setting health care capitation payments. *Health Economics* 11(8): 667–677.

Heale J, Abernathy T, Kittle D (2000). Using healthy life years (HeaLYs) to assess programming needs in a public health unit. *Canadian Journal of Public Health* 91(2): 148–152.

Health Advisory Service (UK) (2001). *The substance of young needs.* London: Health Advisory Service and the Home Office Drugs Prevention Advisory Service.

HealthInsite (Australian Government) http://www.healthinsite.gov.au

Hill S (1998). *Using the evidence: empowering the consumers of health care. Evidence-based Health Advice Workshop, 4–5 November 1998.* The Menzies Foundation in association with the Health Advisory Committee of the National Health and Medical Research Council.

Hindle D (2001). The Australian DRG classification: are we ready for structural changes? *Australian Health Review* 24(3): 16–21.

Hindle D (2002a). Health care funding in New South Wales: from health care needs to hospital outputs. *Australian Health Review* 25(1): 40–71.

Hindle D (2002b). Health care funding in the Australian Capital Territory: From hospital to community. *Australian Health Review* 25(1): 121–140.

Hindle D, Lenz M (2001). Using Australian DRGs in Germany: a commentary. *Australian Health Review* 24(1): 136–147.

Hindle D, Frances M, Pearse J (1998). Casemix funding in rural NSW: exploring the effects of isolation and size. *Australian Health Review* 21(4): 174–191.

Hodgins D (2001). Stages of change assessments in alcohol problems: Agreement across self and clinician reports. *Substance Abuse* 22(2): 87–96.

Hoffmann F, Capelli K, Mastrianni X (1997). Measuring treatment outcome for adults and adolescents; reliability and validity of BASIS-32. *Journal of Mental Health Administration* 24(3): 316–331.

Hope T (1996). *Evidence-Based Patient Choice*. London: King's Fund Publishing.

Horton R (2002). What the UK government is (not) doing about health inequalities. *The Lancet* 360(9328): 186.

Humphreys J (2002). Can addiction related self help/mutual aid groups lower demand for professional substance abuse treatment? *Social Policy*: 29(2): 13–17.

Humphreys J, Hegney D, Lipscombe J, Gregory G, Chater B (2002). Wither rural health? Reviewing a decade of progress in rural health. *Australian Journal of Rural Health* 10: 2–14.

Ingram J (1988). Alcoholism treatment demand estimation. *Health Marketing Quarterly* 6(1–3): 195–205.

Jarman B, Hirsch S, White P, Driscoll R (1992). Predicting psychiatric admission rates. *British Medical Journal* 304(6835): 1146–1151.

Johnson TP, Bowman PJ (2003). Cross-cultural sources of measurement error in substance use surveys. *Substance Use and Misuse* 38, 1447–1490.

Joint Policy and Planning Committee (1994). *An approach for funding small hospitals.* Joint Policy and Planning Committee: Ontario Ministry of Health and Ontario Hospital Association.

Jones K, Duncan C (1995). Individuals and their ecologies: analysing the geography of chronic illness within a multilevel modelling framework. *Health and Place* 1(1): 27–40.

Judge K, Mays N (1994a). Equity in the NHS. Allocating resources for health and social care in England. *British Medical Journal* 308(6955): 1363–1366.

Judge K, Mays N (1994b). A new approach to weighted capitation. *British Medical Journal* 309(6961): 1031–1032.

Jutkowitz J (1995). The uses of data in drug policy formulation. *Drugs Education, Prevention and Policy* 2(1): 27–39.

Kanavos P, Trueman P, Bosilivac A (2000). Can economic evaluation guidelines improve efficiency in resource allocation? The cases of Portugal, The Netherlands. Finland, and United Kingdom. *International Journal of Technology Assessment in Health Care* 16(4): 1179–1192.

Kandel DB, Faust R (1975). Sequence and stages in patterns of adolescent drug use. *Archives of General Psychiatry* 32(7): 923–932.

Kaye J (2001). Target complaints as a measure of outcome in psychotherapy with the depressed elderly. Dissertation Abstracts International: Section b: *The Sciences and Engineering* 62(5–B): 2488.

Kessler R, Zhao S, Katz SJ, Kouzis AC, Frank RG, Edlund M, Leaf P (1999). Past year use of outpatient services for psychiatric problems in the National Comorbidity Survey. *American Journal of Psychiatry* 156(1): 115–123.

Kim S, Wurster L, Williams C, Hepler N (1998a). Algorithms for resource allocation of substance abuse prevention funds based on the estimated need: a case study on state of Florida — Part 1. *Journal of Drug Education* 28(2): 87–106.

Kim S, Wurster L, Williams C, Hepler N (1998b). Algorithms for resource allocation of substance abuse prevention funds based on composite risk–factor index score; a case study on state of Florida — Part 2. *Journal of Drug Education* 28(3): 169–184.

Kim S, Wurster L, Williams C, Hepler N (1998c). Algorithms for resource allocation of substance abuse prevention funds based on social indicators: a case study on state of Florida — Part 3. *Journal of Drug Education* 28(4): 283–306.

Kip, KE, Peters, RH, Morrison-Rodriguez, B (2002). Commentary on why national epidemiological estimates of substance abuse by race should not be used to estimate prevalence and need for substance abuse services at community and local levels. *American Journal of Drug and Alcohol Abuse* 28: 545–556.

Koch J (1992). A funding system for community mental health services. *Administration and Policy in Mental Health Services* 20(2): 101–115.

Kodjo CM, Klein JD (2002). Prevention and risk of adolescent substance abuse. The role of adolescents, families, and communities. *Pediatric Clinics of North America*, 49(2): 257–268.

Kramer M (1976). Issues in the development of statistical and epidemiological data for mental health services research. *Psychological Medicine* 6(2): 185–215.

Lelliott P, Beevor A, Hogman G, Hyslop J, Lathlean J, Ward M (2001). Carers' and Users' Expectations of Services User version (CUES-U). A new instrument to measure the experience of users of mental health services. *British Journal of Psychiatry* 179: 67–72.

Lenze EJ, Miller MD, Dew MA, Martire LM, Mulsant BH, Begley AE, Schulz R, Frank E, Reynolds CF 3rd. (2001). Subjective health measures and acute treatment outcomes in geriatric depression. *International Journal of Geriatric Psychiatry* 16(12): 1149–1155.

Lesage AD, Clerc D, Uribe I, Cournoyer J, Fabian J, Tourjman V, Van Haaster I, Chang CH (1996). Estimating local area needs for psychiatric care: a case study. *British Journal of Psychiatry* 169(1): 49–57.

Lindholm M (1997). *The role of lead agencies in expanding the scope of participation in the community planning and decision-making. The Community Web-ASA convention in Toronto.* Community & Urban Sociology Section, American Sociological Association.

Lloyd DC (2002). Correlation leads to counter-intuitive sign in model. Rapid response to an article in BMJ 324:390 by Carr Hill et al. (2002). http://bmj.bmjjournals.com/cgi/eletters/324/7334/390#20134

Logan BM, Rochefort DA, Cook EW (1985). Block grants for mental health: elements of the state response. *Journal of Public Health Policy* 6(4): 476–492.

Lomas J (1997). Reluctant rationers: public input to health care priorities. *Journal of Health Services Research and Policy* 2/2: 103–111.

Lomas J (1998). Research and evidence-based decision making. *Australian and New Zealand Journal of Public Health* vol 21 no 5, 439ff.

Luger L, Carrier J, Power R (2001). Mapping as a method for analysing policy response in the management of health services. *Health Services Management Research* 14(4): 220–228.

Majeed A, Bardsley M, Morgan D, O'Sullivan C, Bindman AB (2000). Cross sectional study of primary care groups in London: association of measures of socioeconomic and health status with hospital admission rates. *British Medical Journal* 321 (7268): 1057–1060.

Majeed FA, Martin D, Crayford T (1996). Deprivation payments to general practitioners: limitations of census data. *British Medical Journal* 313 (7058): 669–670.

Mammo A, French J (1996). On a construction of a Relative Needs Assessment Scale. *Substance Use and Misuse* 31(6): 753–765.

Mammo A, French J (1998). Using social indicators to predict addiction. *Substance Use and Misuse* 33(12): 2499–2513.

Marshall MN, Shekelle PG, Leatherman S, Brook RH (2000). The public release of performance data. What do we expect to gain? A review of the evidence. *JAMA* 283(14): 1866–1874

Martin DK, Giacomini M, Singer PA (2002). Fairness, accountability for reasonableness, and the views of priority setting decision-makers. *Health Policy* 61(3): 279–290.

Matilins S (1975). Planning a personal view and some practical considerations. *Annals of the American Academy of Political and Social Science* 417: 41–52.

Maxwell JC, Wallisch LS, Farabee D, Spence RT, Liu LY (1997). A model for assessing primary prevention needs and resources. *Journal of Primary Prevention* 17(3): 315–334.

McAuliffe WE (1990). Health care policy issues in the drug abuser treatment field. *Journal of Health Politics, Policy and Law* 15(2): 357–385.

McAuliffe WE, Woodworth R, Zhang CH, Dunn RP (2002). Identifying substance abuse treatment gaps in substate areas. *Journal of Substance Abuse Treatment* 23: 199–208.

McAuliffe WE, LaBrie R, Woodworth R, Zhang CH, Dunn RP (2003). State substance abuse treatment gaps. *The American Journal on Addictions* 12(2): 101–121.

McAuliffe WE, Dunn RP (2004). Substance abuse treatment needs and access in the USA: Interstate Variations. *Addiction* 99(8): 999–1014.

McCarthy W, Zhou Y, Hser YI (2001). Psychosocial versus nicotine only self reported measures for prediction follow up smoking status. *Journal of Behavioral Medicine* 24(1): 75–91.

McCrone P, Phelan M (1994). Diagnosis and length of psychiatric in-patient stay. *Psychological Medicine* 24(4): 1025–1030.

McDermott R (1995). Improving health equity and efficiency in the bush: a needs-based method for health care resource allocation in remote communities. *Australian Journal of Rural Health* 3: 72–79.

Meadow G (1997). Geographic resource allocation for public mental health services in Victoria. *Australian and New Zealand Journal of Psychiatry* 31 (1): 95–104.

Medicare Payment Advisory Commission. *MedPAC. 2001: Report to the Congress. Medicare In Rural America* Washington, DC. Medicare Payment Advisory Commission.

Mitton C, Donaldson C (2001). Twenty-five years of programme budgeting and marginal analysis in the health sector: 1974–1999. *Journal of Health Services Research and Policy* 6: 239–248.

Mitton C, Donaldson C (2003a). Setting priorities and allocating resources in health regions: lessons from a project evaluating program budgeting and marginal analysis (PBMA). *Health Policy* 64: 335–348.

Mitton C, Donaldson C (2003b). Tools of the trade: a comparative analysis of approaches to priority setting in healthcare. *Health Services Management Research* 16 (2): 96–105.

Mitton C, Donaldson C (2004). Health care priority setting: principles, practice and challenges. *Cost-effectiveness and Resource Allocation* 2:3.

Mitton C, Patten S (2004). Evidence-based priority setting: what do decision-makers think? *Journal of Health Services Research and Policy* 2004 9(3): 146–152.

Montoya ID, Atkinson JS (2002). A synthesis of welfare reform policy and its impact on substance users. *American Journal of Drug and Alcohol Abuse,* 28(1): 133–146.

Mooney G, Russell E, Weir R (1986). *Choices for Health Care: A Practical Introduction to the Economics of Health Provision.* London: Macmillan.

Mooney G, Jan S, Wiseman V (2002). Staking a claim for claims: a case study of resource allocation in Australian Aboriginal health care. *Social Science and Medicine* 54: 1657–1667.

Nakashian M (2002). Substance abuse and welfare reform. *Journal of the American Medical Women's Association*, 57(1): 36–7, 40.

Namjoshi MA, Buesching DP (2001). A review of the health related quality of life literature in bipolar disorder. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment Care and Rehabilitation* 10(2): 105–115.

National Aboriginal and Torres Strait Islander Health Council (2000). *National Aboriginal and Torres Strait Islander Health Strategy, Consultation Draft.* Canberra: NATSIHC.

National Health Service (UK) (1998). *Information for Health. An Information Strategy for the Modern NHS 1998–2005.* London: NHS.

National Treatment Agency for Substance Abuse (NTA) (2002). *Models of care for the treatment of adult drug misusers.* London: National Health Service.

Normand C, Sanderon C, McCartney P, Cox H, Dolea C, Gastlenuovo E, Chambers M, Hutton J (2002). *NHS Resource Allocation Scoping Study: overview report.* London: Department of Health.

NSW Health (2005). *NSW Health's funding approach: equity and efficiency.* Sydney: NSW Health. http://www.health.nsw.gov.au/pubs/2005/pdf/equityefficiency.pdf

O'Hare T (2002). Problem severity among outpatients mental health clients: Development and validation of the South Shore Problem Inventory Revised. *Research on Social Work Practice* 5(1): 107–119.

O'Malia L, McFarland BH, Swanson WJ, Mahler J (2002). A level-of-functioning self-report measure for consumers with severe mental illness. *Psychiatric Services* 53(3): 326–331.

Openshaw S (1984). Ecological fallacies and the analysis of areal census data. *Environment & Planning A*, 16(1): 17–31.

O'Toole TP, Conde-Martel A, Gibbon JL, Hanusa BH, Fine MJ (2003). Health care of homeless veterans. *Journal of General Internal Medicine*, 18(11): 929–933.

Ozer S, Ulusahin A, Batur S, Kabakci E, Saka MC (2002). Outcome measures of interepisode bipolar patients in a Turkish sample. *Social Psychiatry and Psychiatric Epidemiology* 37(1): 31–37.

Pampalon R, Saucier A, Berthiaume N, Ferland P, Couture R, Caris P, Fortin L, Lacroix D, Kirouac R. (1996). The selection of needs indicators for regional resource allocation in the fields of health and social services in Quebec. *Social Science and Medicine* 42(6): 909–922.

Patterson TL, Goldman S, McKibbin CL, Hughs T, Jeste DV (2001). USCD performance based skills assessment: Development of new measure of everyday functioning for severely mentally ill adults. *Schizophrenia Bulletin* 27(2): 235–245.

Pink G (April 1994). *Economies of scale in the production of inpatient services by Ontario acute hospitals.* Hospital Management Research Unit, University of Toronto.

Poulton R, Caspi A, Milne BJ, Thomson WM, Taylor A, Sears MR, Moffitt TE (2002). Association between children's experience of socioeconomic disadvantage and adult health: a life-course study. *The Lancet* 23;360(9346): 1640–5.

Prendergast ML, Podus D (2000). Drug treatment effectiveness: an examination of conceptual and policy issues. *Substance Use and Misuse* 35: 1629–1658.

Rapoport M, Feinstein A (2001). Age and functioning after mild traumatic brain injury. *Brain Injury* 15(10): 857–864.

Read N, Gehrs M (1997). Innovative service redesign and resource reallocation: responding to political realities, mental health reform and community mental health needs. *Canadian Journal of Nursing Administration* 10(4): 7–22.

Regier DA, Shapiro S, Kessler LG, Taube CA (1984). Epidemiology and health service resource allocation policy for alcohol, drug abuse, and mental disorders. *Public Health Reports* 99(5): 483–492.

Renner JJ (1983). Methadone maintenance: past, present, and future. *Advances in Alcohol & Substance Abuse* 3(1–2): 75–90.

Reutter LI, Harrison MJ, Neufeld A (2002). Public support for poverty-related policies. *Canadian Journal of Public Health* 93(4): 297–302.

Rice N, Dixon P, Lloyd DC, Roberts D (2000). Derivation of a needs based capitation formula for allocating prescribing budgets to health authorities and primary care groups in England: regression analysis. *British Medical Journal* 320(7230): 284–288.

Rice N, Smith PC (2001). Capitation and Risk Adjustment in Health Care Financing: An International Progress Report. *The Milbank Quarterly* 79(1): 81–113.

Richmond R (1993). Increasing resource allocation and research into tobacco control activities; a comprehensive approach including primary prevention, treatment and brief intervention. *Drug and Alcohol Review*, 12, 205–215.

Rochefort DA (ed.) (1989). *Handbook on mental health policy in the United States.* Foreword by Edward M Kennedy. New York: Greenwood Press.

Rogalski C (1993). The political process and its relationship to the psychotherapy of substance misusers: An historical perspective. *International Journal of the Addictions* 28(1): 1–46.

Royston GHD, Hurst JW, Lister EG, Stewart PA (1992). Modelling the Use of Health Services by Population of Small Areas to Inform the Allocation of Central Resources to Larger Regions. *Socio-Economic Planning Sciences* 26(3): 169–180.

Ruggeri M, Bisoffi G, Fontecedro L, Warner R (2001). Subjective and objective dimensions of quality of life in psychiatric patients: a factor analytical approach. The South Verona Outcome Project 4. *British Journal of Psychiatry* 178: 268–275.

Rundell O, Paredes A (1979). Benefit cost methodology in the evaluation of therapeutic services for alcoholism. Alcoholism, *Clinical and Experimental Research* 3(4): 324–333.

Sanson-Fisher RW, Redman S, Oak S, Webb G (1988). The burden of illness that is imposed by drug abuse and the allocation of research monies in the field: three views. *Medical Journal of Australia* 149 (3): 134–138.

Sason F (1987). Who determines the burden of illness and where research monies should be spent. *Community Health Studies* 11(3): 234.

Schwappach DL (2002). Resource allocation, social values and the QALY: a review of the debate and empirical evidence. *Health Expectations: an international journal of public participation in health care and health policy.* 5(3): 210–222.

Schwartz S (1994). The fallacy of the ecological fallacy: the potential misuse of a concept and the consequences. *American Journal of Public Health* 84: 819–824.

Scottish Executive Health Department (1999). *Fair Shares for All. Report of the National Review of Resource Allocation for the NHS in Scotland.* Scottish Executive Health Department, Edinburgh.

Shaw R, Smith P (2001). Allocating health care resources to reduce health inequalities *Health Care UK* 2001 7–13.

Sheffet AM, Kakumanu PV, Lavenhar MA, Feuerman M (1982). Treatment benefit functions for a drug abuse rehabilitation treatment system. *Social Science & Medicine* 16(24): 2109–2116.

Sheldon TA (1997). Formula fever: allocating resources in the NHS. *British Medical Journal* 315(7114): 964.

Shepard D, Larson M, Hoffmann NG (1999). Cost effectiveness of substance abuse services. Implications for public policy. *Psychiatric Clinics of North America* 22(2): 385–400.

Shepherd J (2002). Resource management in prevention of coronary heart disease: optimising prescription of lipid-lowering drugs. *The Lancet* 359 (9325): 2271–2273.

Sherman RE, Gillespie S, Diaz JA (1996). Use of social indicators in assessment of local community alcohol and other drug dependence treatment needs within Chicago. *Substance Use and Misuse* 31(6): 691–728.

Shern D, Goosser R (1992). Implications of advances in indirect needs-assessment models for mental health planning and administration. *Evaluation and Program Planning* 15(2): 211–213.

Simeone R, Frank B, Aryan Z (1993). Needs assessment in substance misuse: A comparison of approaches and case study. *International Journal of the Addictions* 28(8): 767–792.

Simpson L, Sutton M (1997). An alternative approach to drug policy outcome measurement. *Addiction Research* 5(6): 487–506.

Smith P, Sheldon TA, Carr-Hill RA, Martin S, Peacock S, Hardman G (1994). Allocating resources to health authorities: results and policy implications of small area analysis of use of inpatient services. *British Medical Journal* 22; 309 (6961):1050–1054.

Smith P, Sheldon TA, Martin S (1996). An index of need for psychiatric services based on inpatient utilisation. *British Journal of Psychiatry* 169: 308–316.

Spooner C, Hall W, Lynskey M (2001). *Structural determinants of youth drug use.* Canberra: ANCD. http://www.ancd.org.au/publications/pdf/rp2_youth_drug_use.pdf

Suris AM, Kashner TM, Gillaspy JA, Biggs M, Rush JA (2001). Validation of the Inventory of Depressive symptomatology (IDS) in cocaine dependent inmates. *Journal of Offender Rehabilitation* 32(4): 15–30.

Thomas R, Bellis M (1997). Drug misuse services. No quick fixes. *Health Service Journal* 107(5576): 30–31.

Tranmer M, Steel DG (1998). Using census data to investigate the causes of the ecological fallacy. Environment & Planning A, 30(5): 817–831.

Uehara ES, Smukler M, Newman FL (1994). Linking resource use to consumer level of need: field test of the level of need care assessments (LONCA) method. *Journal of Consulting and Clinical Psychology* 62(4): 695–709.

Van de Ven WPMM, Ellis RP (2000). 'Risk adjustment in Competitive Health Plan Markets'. In Culyer AJ, Newhouse JP (eds) *Handbook of Health Economics.* Elsevier, Amsterdam, Vol 1A, 755–845.

Wallace CJ, Lecomte T, Wilde J, Liberman RP (2001). CASIG: A consumer centered assessment for planning individualized treatment and evaluating program outcomes. *Schizophrenia Research* 50(1–2): 105–119.

Weisner C (1993). Toward an alcohol treatment entry model: a comparison of problem drinkers in the general population and in treatment. *Alcoholism: Clinical and Experimental Research* 17, 746–752.

Welham J, Haire M, Mercer D, Stedman T (2001). A gap approach to exploring quality of life in mental health. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment Care and Rehabilitation* 10(5): 421–429.

Wessman J, Edie C (1976). Undetected opiate use in the Southwest: comparison of official drug user files and treatment program patient records. *American Journal of Drug and Alcohol Abuse* 3(2): 235–242.

Westermeyer J (1990). Methodological issues in the epidemiological study of alcohol-drug problems: sources of confusion and misunderstanding. *American Journal of Drug and Alcohol Abuse* 16, 47–55.

Whiteford H (2000). Unmet need: A challenge for governments. In: Andrews G, Henderson, AS, (eds). *Unmet Need in Psychiatry.* London: Cambridge University Press, 8–10.

Wiersma D, Van Busschbach J (2001). Are needs and satisfaction of care associated with quality of life? An epidemiological survey among the severely mentally ill in the Netherlands. *European Archives of Psychiatry and Clinical Neuroscience* 251(5): 239–246.

Wilkin D, Dowswell T, Leese B (2001). Modernising primary and community health services. *British Medical Journal* 322(7301): 1522–1524.

Wood B, Pead J (1995). *Practice guidelines for health professionals.* Parkville: Department of Health and Community Medicine, University of Melbourne.

World Health Organisation, United Nations International Drug Control Programme, and European Monitoring Center on Drugs and Drug Addiction (2000). *Evaluation of psychoactive substance use disorder treatment, Workbook 8: Economic evaluations.* http://whqlibdoc.who.int/hq/2000/WHO_MSD_MSB_00.2i.pdf

Zarkin GA, French MT (1994). A conceptual framework for the economic evaluation of substance abuse interventions. *Evaluation and Program Planning* 17(4): 409–418.